HCD-N300/N300K

SERVICE MANUAL

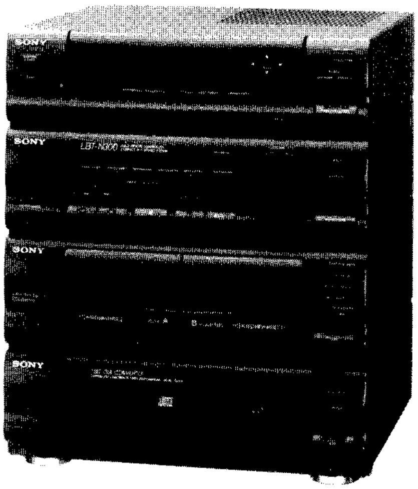

Photo : HCD-N300

AEP Model
UK Model
HCD-N300
E Model
HCD-N300K

These set are the tuner, deck, CD and amplifier section in LBT-N300 and LBT-N300K.

CD SECTION	Model Name Using Similar Mechanism	HCD-N200
	Base Unit Type	BU-5BD19
	Optical Pick-up Type	KSS-213BA
TAPE DECK SECTION	Model Name Using Similar Mechanism	HCD-N350/N350K
	Tape Transport Mechanism Type	TCM-220WR2

SPECIFICATIONS

CD player section

System Compact disc digital audio system
Laser Semiconductor laser
Wavelength 780–790 nm

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
EE, CIS models: 65.0–74.0 MHz (10 kHz step)
87.5–108.0 MHz (50 kHz step)
Other models: 87.5–108.0 MHz
Aerial FM wire antenna
Aerial terminals 75 ohm unbalanced
Intermediate frequency
10.7 MHz

AM tuner section

Tuning range
AEP, EE, CIS models:
MW: 531–1,602 kHz
LW: 153–279 kHz
(with the tuning interval set at 3 kHz)
Middle Eastern model:
MW: 531–1,602 kHz
(with the tuning interval set at 9 kHz)
SW: 5.95–17.90 kHz
Other models:
AM: 531–1,602 kHz
(with the tuning interval set at 9 kHz)
Aerial AM loop aerial
External aerial terminals
Intermediate frequency
450 kHz

Casette deck section

Recording system
4-track 2-channel stereo
Frequency response
AEP, EE, CIS models:
(DOLBY NR OFF)
40–13,000 Hz (± 3 dB), using Sony TYPE I cassette
40–14,000 Hz (± 3 dB), using Sony TYPE II cassette
Other models:
40–13,000 Hz (± 3 dB), using Sony TYPE I cassette
40–14,000 Hz (± 3 dB), using Sony TYPE II cassette
Wow and flutter
± 0.15% W.Peak (IEC)
0.1% W.RMS (NAB)
± 0.2% W.Peak (DIN)

— Continued on next page —

COMPACT DISC DECK RECEIVER

SONY®

MICROFILM

Amplifier section

Peak music power output (N300K):
650 W
Continuous RMS power output:
30 W+30 W, (6 ohms at 1 kHz, DIN)
35 W+35 W, (6 ohms at 1 kHz, 5% THD)
Music power output (N300):
60 W+60 W (6 ohms at 1 kHz, 10% THD)
Inputs
PHONO (phono jack):
Sensitivity 3 mV, impedance 47 kilohms
VIDEO (phono jack):
Sensitivity 300 mV, impedance 47 kilohms
MC 1, 2 (phono jack) (N300K):
Sensitivity 1 mV, impedance 10 kilohms
Outputs
PHONES (phono jack):
accept headphones of 8 ohms or more.
SPEAKER:
accept impedance of 6 to 16 ohms.
SURROUND SPEAKER:
(AEP, EE CIS models)
Accept impedance of 16 ohms.
(SP, MY models)
Accept impedance of 16 ohms.
(Other models)
Accept impedance of 8 to 16 ohms.

Supplied accessories

AM loop aerial (1)
Remote RM-S300L (1)
Sony SUM-3 (NS) battieries (2)
FM wire aerial (1)

General

Power requirements
AEP, EE, CIS models:
220–230 V AC, 50/60 Hz
MY model:
220–240 V AC, 50/60 Hz
Other models:
110–120 V or 220–240 V AC adjustable, 50/60 Hz
Power consumption
105W
Dimensions
Approx. 355 × 425 × 355 mm (w/h/d)
incl. projecting parts and controls
Mass Approx. 8.3 kg (N300)
Approx. 8.8 kg (N300K)

Design and specifications subject to change without notice.

- Abbreviation
  - EE : East European model
  - MY : Malaysia model
  - SP : Singapole model

SAFETY-RELATED COMPONENT WARNING !!
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN AVOID EXPOSURE TO BEAM
ADVARSEL ; USYNLIG LASERSTRALING VED ABNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGA UDSÆTTELSE FOR STRALING
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA LASERSATEILYLLE.
VARNING ; LASERSTRALING NAR DENNA DEL AR OPPNAD OCH SPARREN AR URXOPPLAD
ADVARSEL ; USYNLIG LASERSTRÅLING NAR DEKSEL APNES UNNGA EKSPONERING FOR STRÅLEN

This caution label is located inside the unit.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

Notes on chip component replacement

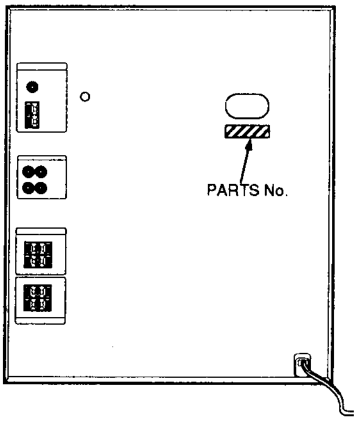
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor ofthe circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION

— BACK PANEL —



	PARTS NO.
N300 : AEP 2 Model	4-969-783-1□
N300 : AEP 1 Model (made in malaysia)	4-969-783-2□
N300 : AEP 1 Model (made in indonesia)	4-969-783-3□
N300 : German Model	4-969-783-4□
N300 : Italian Model	4-969-783-5□
N300 : East European Model	4-969-783-6□
N300 : CIS Model	4-969-783-7□
N300 : UK Model	4-969-783-8□
N300K : Saudi Arabia Model	4-970-162-0□
N300K : E Model	4-970-162-1□
N300K : Malaysia Model	4-970-162-2□
N300K : Singapore Model	4-970-162-3□

SECTION 1

SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

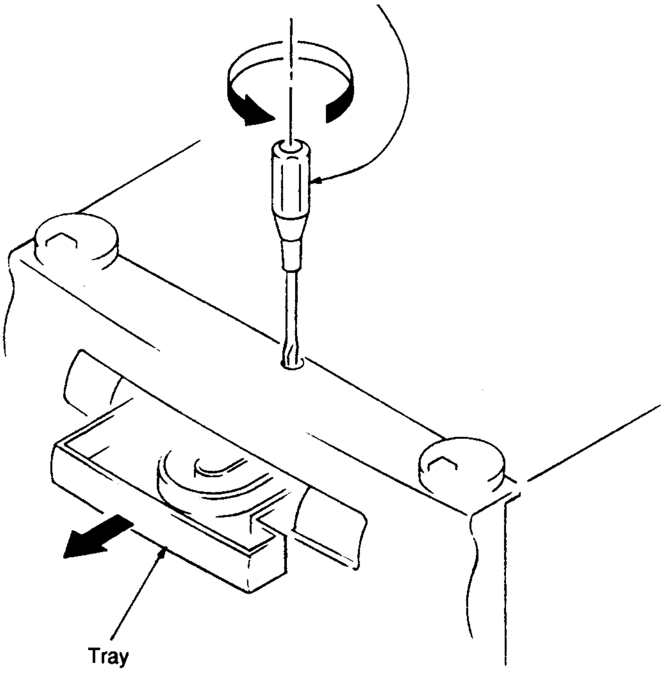
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).



* To close the disc tray, turn the driver in the reverse direction (to IN direction).

SECTION 2 GENERAL

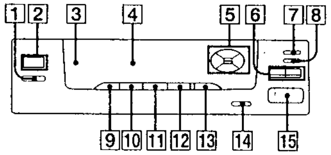
This section is extracted from instruction manual.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls.

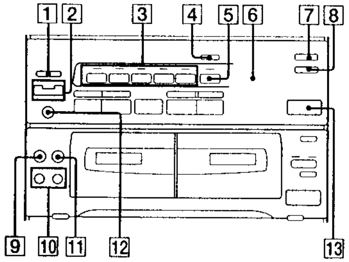
Front Panel

Tuner section



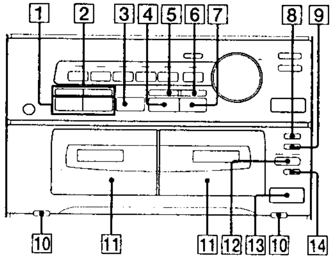
1. SLEEP button (19)
2. SYSTEM POWER switch (20)
3. Remote sensor
4. Display window (25)
5. CURSOR CONTROL buttons (6, 18, 19, 20)
6. TUNING (+/–) buttons (10, 20)
7. TUNING MEMORY button (11)
8. TUNING MODE button (10, 20)
9. TIMER SET button (19)
10. DAILY button (19)
11. REC button (20)
12. CLOCK SET button (6)
13. ENTER/NEXT button (6, 19)
14. DISPLAY button (6, 8, 18)
15. TUNER/BAND button (10, 15)

Amplifier section



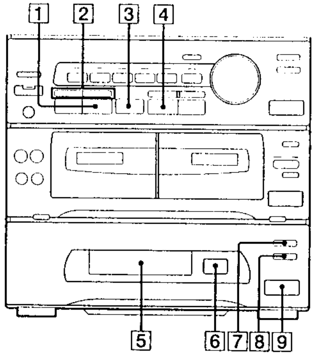
1. KARAOKE PON/MPX button (21) (N300K)
2. KEY CONTOL buttons (21) (N300K)
3. Preset equalizer setting buttons (17)
4. EQ MEMORY button (18)
5. P.FILE button (18)
6. VOLUME control (7, 17, 20)
7. DBFB button (17)
8. SURROUND button (18)
9. MIC LEVEL Control (20) (N300K)
10. MIC 1, 2 jacks (20) (N300K)
11. ECHO LEVEL Control (20) (N300K)
12. PHONES jack (17, 21)
13. FUNCTION button (9, 12, 20)

Tape player section



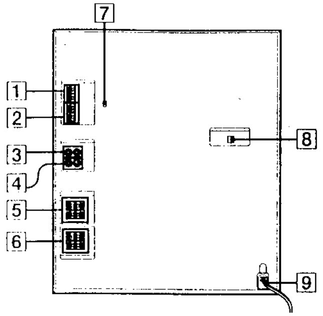
1. ▷ (front side play)
   ◁ (reverse side play) buttons (12)
2. ▶▶ (fast rightward)
   ◀◀ (fast leftward) buttons (12)
3. ■ (stop) button (12)
4. ❚❚ (pause) button (deck B only) (12)
5. HIGH SPEED DUBBING button (16)
6. CD SYNCRO button (13)
7. ● REC button (deck B only) (13)
8. DIRECTION MODE button (12)
9. DOLBY NR selector (12)
10. EJECT button (12)
11. Cassette compartments (12)
12. DECK SELECT button (12)
13. TAPE button (12)
14. ◀◀ TAPE REWIND button (12)

CD player



1. ▷ (play) button (7)
2. ⏮◀◀/▶▶⏭ (AMS) buttons (7)
3. ■ (stop) button (7, 20)
4. ❚❚ (pause) button (7)
5. Disc tray (7)
6. ⏏ OPEN/CLOSE button (7, 14)
7. PLAY MODE button (8)
8. REPEAT button (9)
9. CD button (8, 14)

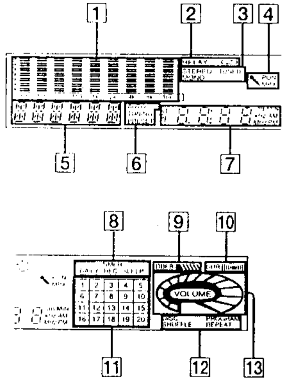
Rear Panel



1. FM 75Ω terminal (4)
2. AM terminal (4)
3. PHONO IN jacks (4)
4. VIDEO IN jacks (20)
5. SPEAKER connectors (4)
6. SURROUND SPEAKER connectors (4, 20)
7. ⏚ ground terminal (4)
8. VOLTAGE SELECTOR* (5)
9. AC power cord (5)

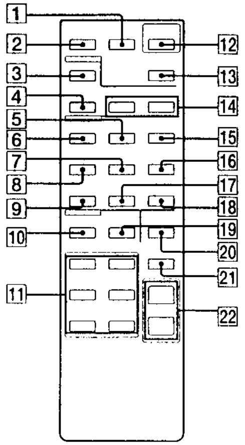
* Except for Malaysian model

Display Window



1. Spectrum analyzer (18)
2. Tape direction indications (12)
3. Tuner indication (10)
4. KARAOKE indication (21)
5. Band/disc/track indications (7, 10, 14, 18, 19)
6. AUTO/TUNING/PRESET/STEP indication (10)
7. Frequency/playing time indications (6, 7, 12, 14, 18, 20)
8. TIMER DAILY/REC/SLEEP indications (19)
9. DBFB indication (17)
10. SURROUND indication (18)
11. Music calendar (7)
12. CD play mode indication (7)
13. VOLUME indication (7)

Remote



1. DISPLAY button (6)
2. FUNCTION button (9)
3. BAND button (10, 15)
4. STEREO/MONO button (10)
5. REPEAT button (9)
6. CD PLAY button (9)
7. SHUFFLE button (8)
8. CONTINUE button (7)
9. CHECK button (9)
10. TAPE PLAY button (12)
11. CD/TAPE operating buttons
    ◀ ▶ (play) (8, 12)
    ◀◀ (fast leftward)/
    ▶▶ (fast rightward) (12)
    ⏮/⏭ AMS* (8)
    ❚❚ (pause) (8, 12)
    ■ (stop) (8, 12)
    * AMS: Automatic Music Sensor.
12. SYSTEM POWER button (8)
13. SLEEP button (19)
14. PRESET (+/–) buttons (10, 20)
15. DISC SKIP button (You cannot use this button with this model)
16. PROGRAM button (9)
17. CLEAR button (9)
18. EDIT button (14)
19. DECK SELECT button (12)
20. PRESET EQ button (17)
21. P.FILE button (18)
22. VOL (volume) buttons (7, 17, 20)

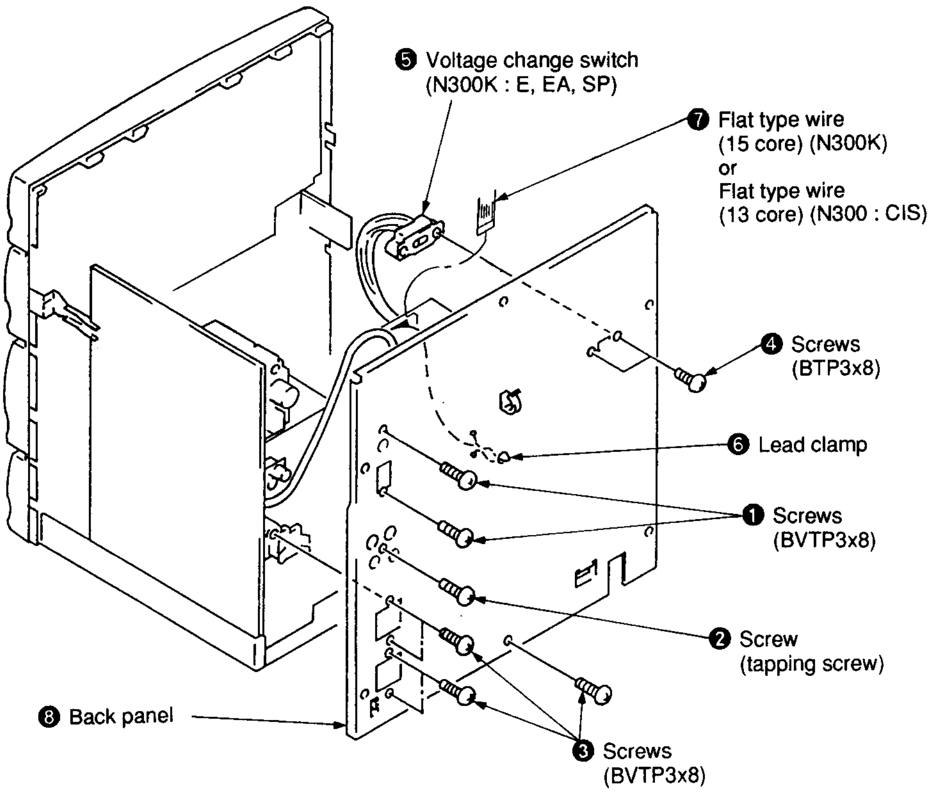
SECTION 3

DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

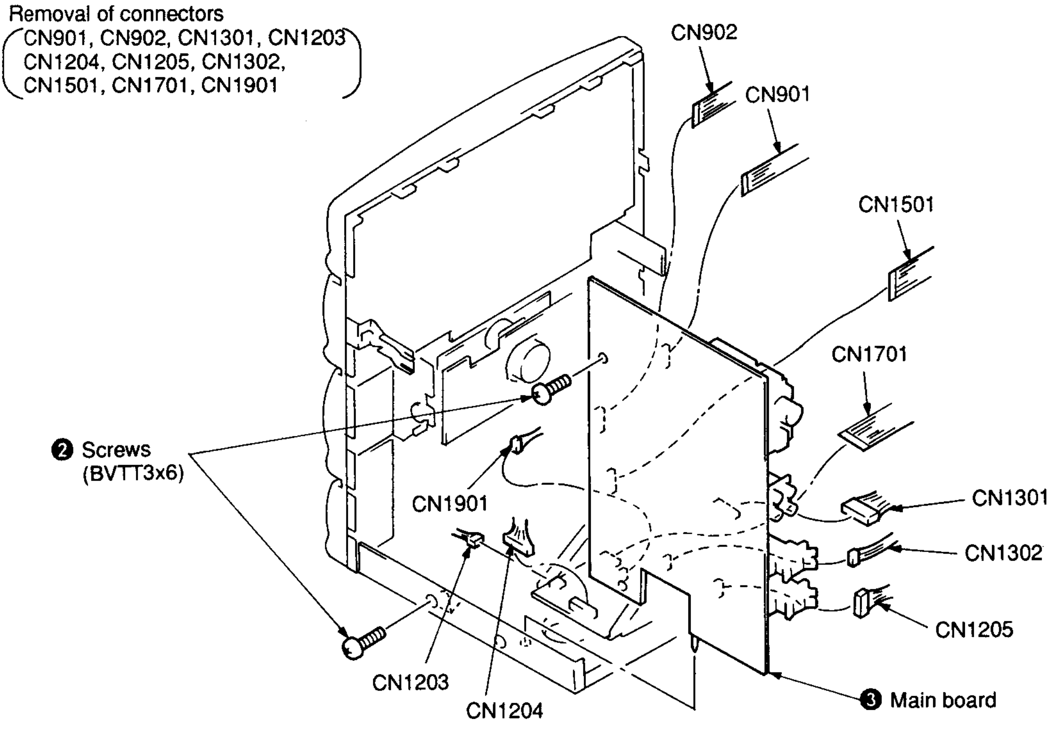
3-1. BACK PANEL

Abbreviations
EA : Saudi Arabia model.
SP : Singapore model.



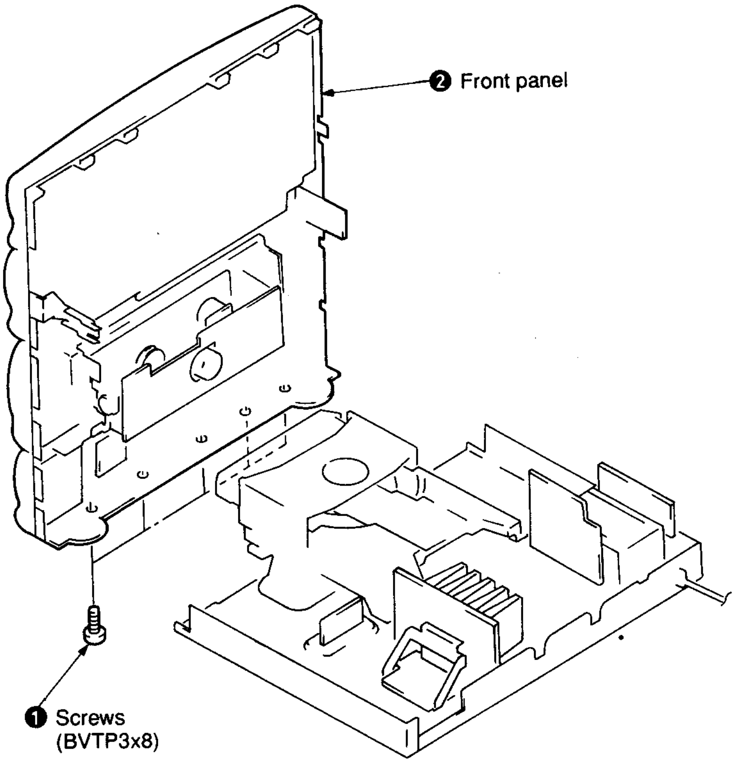
❺ Voltage change switch (N300K : E, EA, SP)
❼ Flat type wire (15 core) (N300K) or Flat type wire (13 core) (N300 : CIS)
❹ Screws (BTP3x8)
❻ Lead clamp
❶ Screws (BVTP3x8)
❷ Screw (tapping screw)
❽ Back panel
❸ Screws (BVTP3x8)

3-2. MAIN BOARD



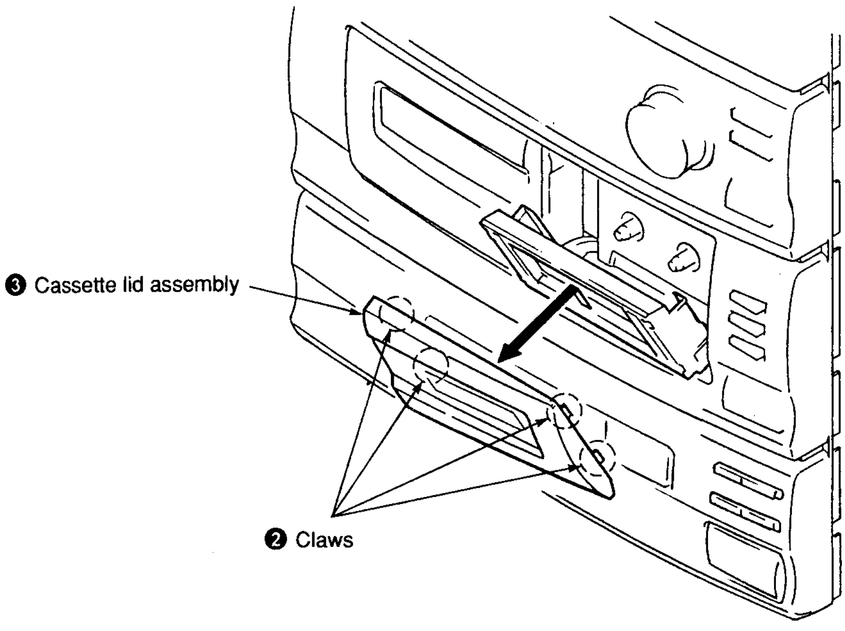
❶ Removal of connectors (CN901, CN902, CN1301, CN1203 CN1204, CN1205, CN1302, CN1501, CN1701, CN1901)
CN902
CN901
CN1501
CN1701
❷ Screws (BVTT3x6)
CN1901
CN1301
CN1302
CN1205
CN1203
CN1204
❸ Main board

3-3. FRONT PANEL

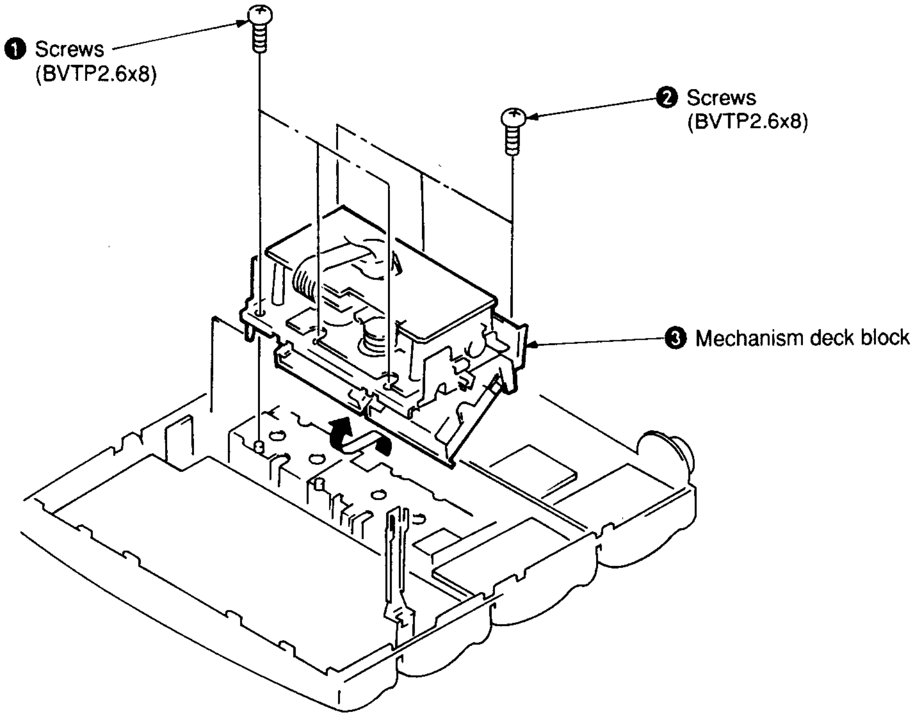

❷ Front panel
❶ Screws
(BVTP3x8)

3-4. CASSETTE LID ASSEMBLY

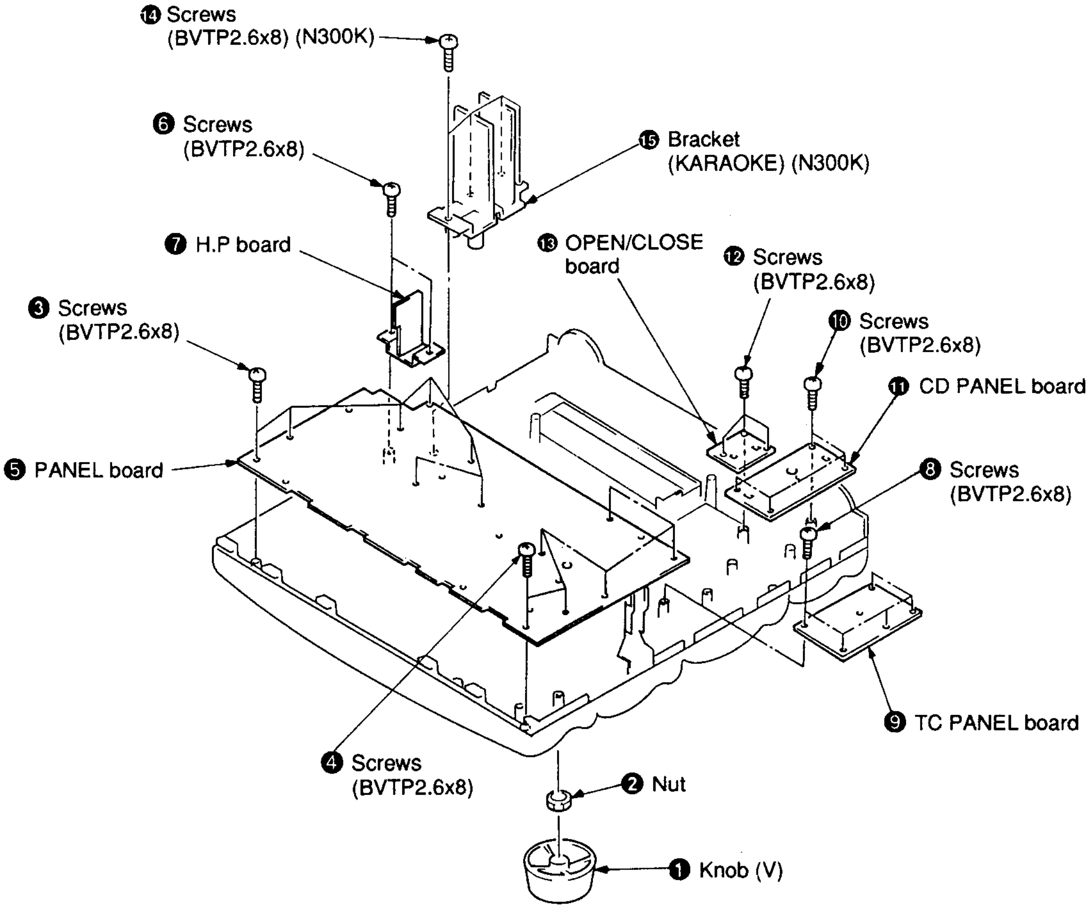
❶ Push the EJECT button.


❸ Cassette lid assembly
❷ Claws

3-5. MECHANISM DECK BLOCK

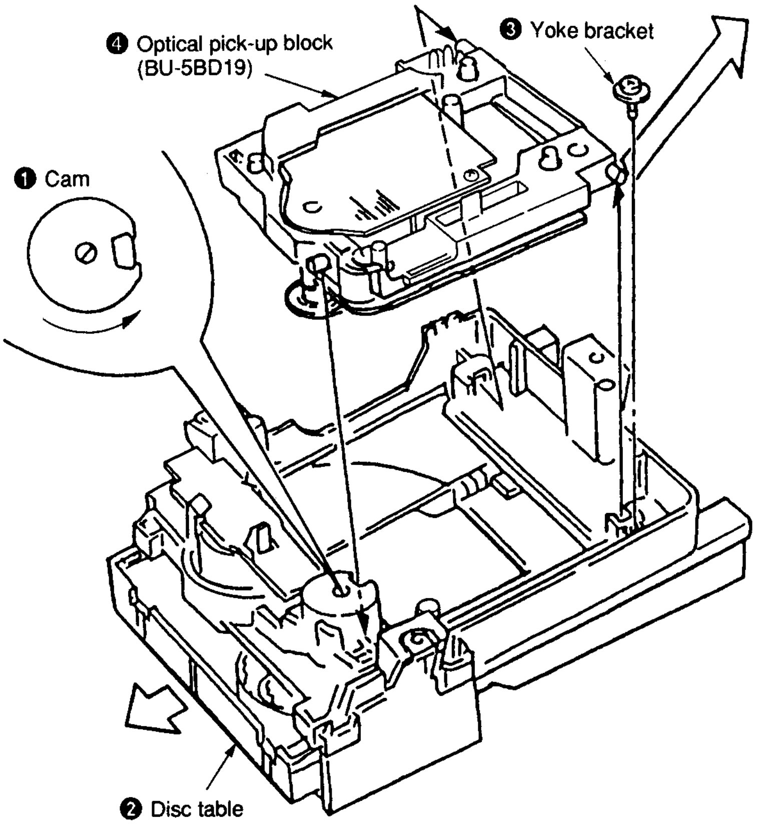

❶ Screws
(BVTP2.6x8)
❷ Screws
(BVTP2.6x8)
❸ Mechanism deck block

3-6. PANEL BOARD


⓮ Screws
(BVTP2.6x8) (N300K)
❻ Screws
(BVTP2.6x8)
⓯ Bracket
(KARAOKE) (N300K)
❼ H.P board
⓭ OPEN/CLOSE
board
⓬ Screws
(BVTP2.6x8)
❸ Screws
(BVTP2.6x8)
❿ Screws
(BVTP2.6x8)
⓫ CD PANEL board
❺ PANEL board
❽ Screws
(BVTP2.6x8)
❾ TC PANEL board
❹ Screws
(BVTP2.6x8)
❷ Nut
❶ Knob (V)

3-7. OPTICAL PICK-UP BLOCK

❶ Turn the cam to the direction of arrow (Counter clokwise) by minus screw driver.
❷ Take off the disc table.
❸ Remove the yoke bracket.
❹ Remove the optical pick-up block (BU-5BD19) to the direction of arrow.


❹ Optical pick-up block (BU-5BD19)
❸ Yoke bracket
❶ Cam
❷ Disc table

SECTION 4

MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab :

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Mesurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	36 to 61g • cm
FWD back tension	CQ-102C	2 to 6g • cm
REV	CQ-102RC	36 to 61g • cm
REV back tension	CQ-102RC	2 to 6g • cm
FF/REW	CQ-201B	61 to 143g • cm
FWD tension	CQ-403A	1kg • cm or more
REV tension	CQ-403R	1kg • cm or more

SECTION 5

ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head damagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-ch.
7. Switches and controls should be set as follows unless otherwise specified.
   TAPE SELECT switch : TAPE I
   DOLBY NR switch : OFF (Except E model)
8. Set to test mode. (Press key switch sometime DISPLAY, FUNCTION and POPS/2 button.)

Tape	Signal	Used for
P-4-A100	10 kHz, -10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

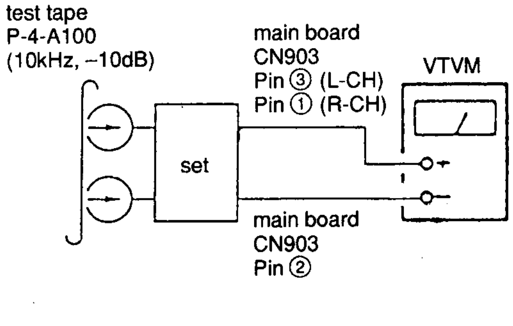
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

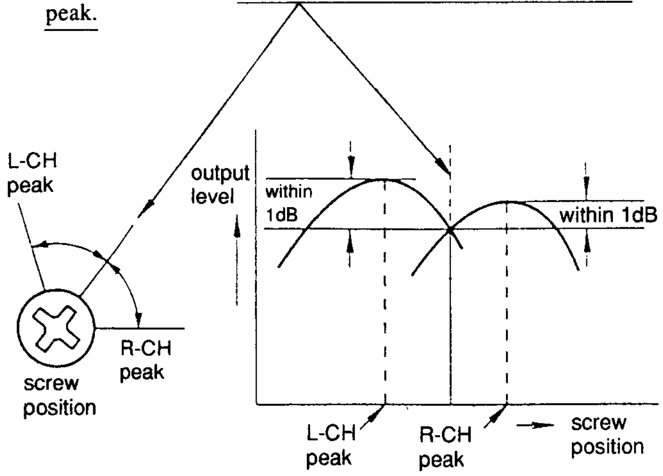
Note : Perform this adjustments for both decks.

Procedure :

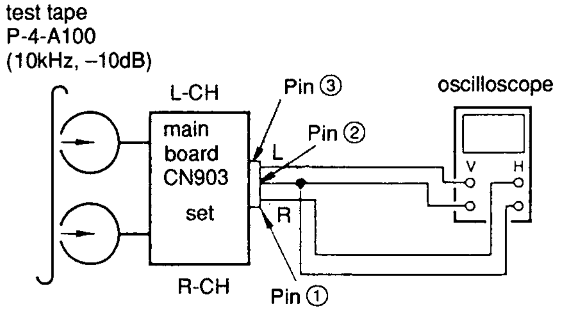
1. Mode : Playback (FWD)

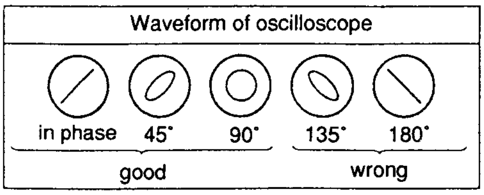


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.


L-CH
peak
R-CH
peak
screw
position
output
level
within
1dB
within 1dB
L-CH
peak
R-CH
peak
screw
position

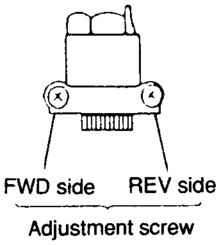
3. Mode : Playback (FWD)


test tape
P-4-A100
(10kHz, –10dB)
L-CH
main
board
CN903
set
R-CH
Pin ③
Pin ②
Pin ①
L
R
oscilloscope
V
H


Waveform of oscilloscope
in phase
45°
90°
135°
180°
good
wrong

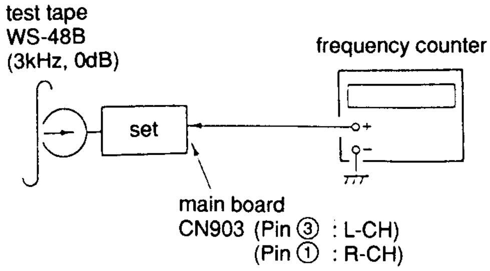
4. Repeat steps 1 to 3 in playback (REV) mode.
5. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location : Record/Playback Head (Deck A and B)


FWD side
REV side
Adjustment screw

Tape Speed Adjustment DECK A DECK B

Procedure :
Mode : Playback (FWD)


test tape
WS-48B
(3kHz, 0dB)
set
frequency counter
+
–
main board
CN903 (Pin ③ : L-CH)
(Pin ① : R-CH)

High speed adjustment

1. Press the HIGH SPEED DUBBING button in playback mode. Then at HIGH speed mode.
2. Adjust RV652 on the MD board so that the frequency counter reads 6,000 ± 30 Hz.

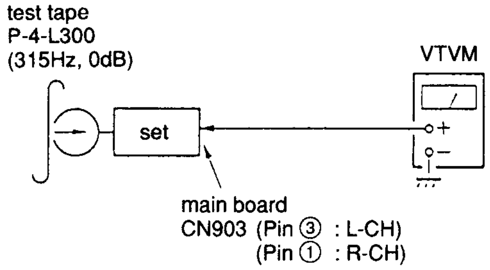
Normal speed adjustment

1. Set to the playback mode.
2. Adjust RV651 on the MD board so that the frequency counter reads 3,000 ± 15 Hz.

Frequency difference between deck A and deck B the beginning of the tape should be within ± 1.5%.
Adjustment Location : MD board

Playback Level Adjustment DECK A DECK B

Procedure :
Mode : Playback (FWD)


test tape
P-4-L300
(315Hz, 0dB)
set
VTVM
+
–
main board
CN903 (Pin ③ : L-CH)
(Pin ① : R-CH)

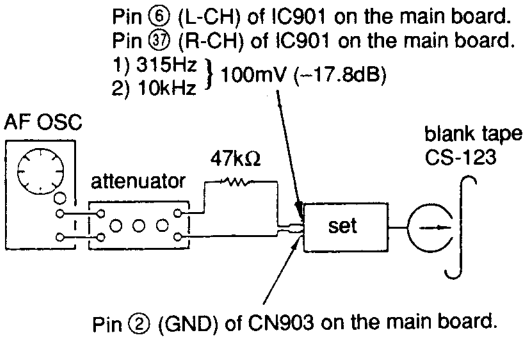
Deck A side RV311 (L-CH), RV411 (R-CH) on the MD board
Deck B side RV301 (L-CH), RV401 (R-CH) on the MD board so that the limits below are satisfied.

Adjustable limits :
CN903 PB level: 301.5 to 338.3 mV (–8.2 to –7.2 dB)
level difference between the channels: within ±0.5 dB
Adjust Location : MD and main boards

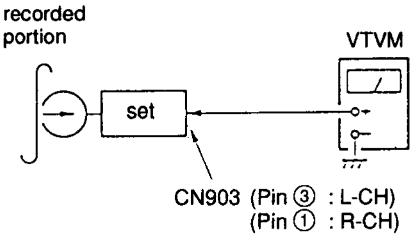
Record Bias Current Adjustment DECK B

Procedure :

1. Mode : record


Pin ⑥ (L-CH) of IC901 on the main board.
Pin ㊲ (R-CH) of IC901 on the main board.
1) 315Hz
2) 10kHz
100mV (–17.8dB)
AF OSC
attenuator
47kΩ
blank tape
CS-123
set
Pin ② (GND) of CN903 on the main board.

2. Mode : Playback


recorded
portion
set
VTVM
CN903 (Pin ③ : L-CH)
(Pin ① : R-CH)

Confirm playback the signal recorded in step 1 become adjustable limits as follows.
If these levels do not adjustable limits, adjustment the RV341 (L-CH) and RV441 (R-CH) on the MD board to repeat steps 1 and 2.

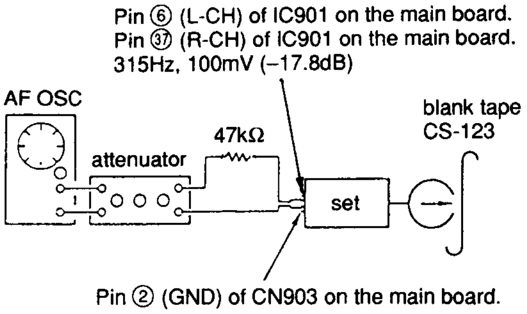
Adjustable limits : Playback output of 315 Hz to playback output of 10 kHz : 0±0.5 dB
Adjustment Location : MD and main boards

Record Level Adjustment DECK B

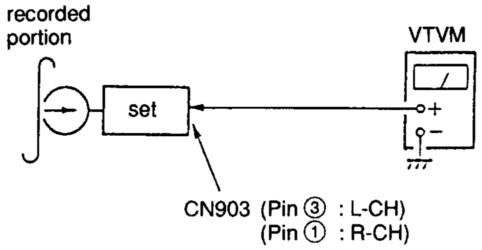
Setting :
TAPE SELECT switch : TYPE I

Procedure :

1. Mode: record


Pin ⑥ (L-CH) of IC901 on the main board.
Pin ㊲ (R-CH) of IC901 on the main board.
315Hz, 100mV (–17.8dB)
AF OSC
attenuator
47kΩ
blank tape
CS-123
set
Pin ② (GND) of CN903 on the main board.

2. Mode: Playback

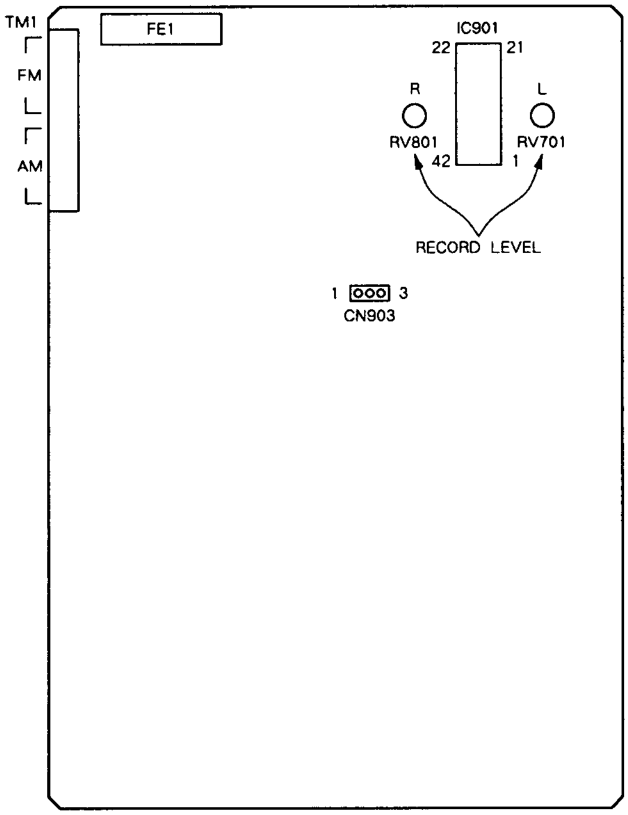

recorded
portion
set
VTVM
+
–
CN903 (Pin ③ : L-CH)
(Pin ① : R-CH)

Confirm playback the signal recorded in step 1 become adjustable limits as follows.
If these levels do not adjustable limits, adjustment the RV701 (L-CH) and RV801 (R-CH) on the main board to repeat steps 1 and 2.

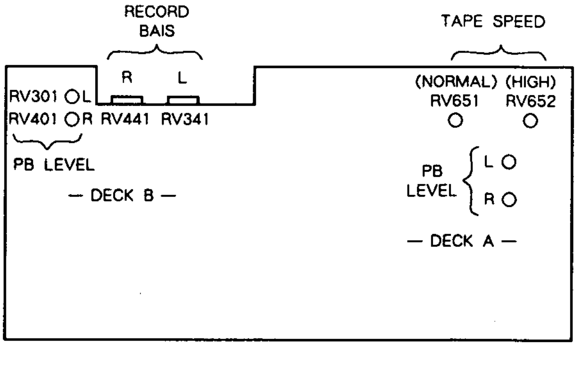
Adjustable limits :
CN903 PB level : 47.3 to 53.1 mV (–24.3 to –23.3 dB)

Adjustment Location : main board

[MAIN BOARD] (Component Side)


TM1
FM
AM
FE1
IC901
22
21
R
L
RV801
RV701
42
1
RECORD LEVEL
1
3
CN903

[MD BOARD] (Conductor Side)


RECORD
BAIS
R
L
RV301 L
RV401 R
RV441
RV341
PB LEVEL
— DECK B —
TAPE SPEED
(NORMAL)
(HIGH)
RV651
RV652
PB
LEVEL
L
R
— DECK A —

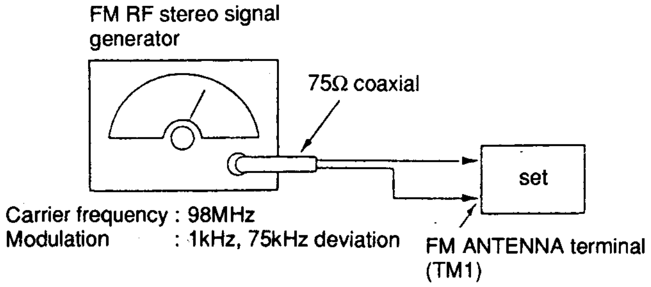
TUNER SECTION

0dB=1μV

Note : As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

FM Section Adjustment

Setting :


FM RF stereo signal generator
75Ω coaxial
set
Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz deviation
FM ANTENNA terminal (TM1)

FM Tuned Level Adjustment

Band : FM

Procedure :

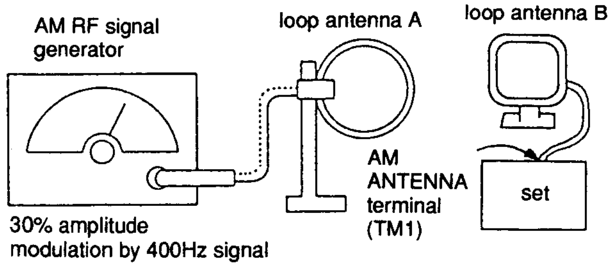
1. Supply a 17.8 μV (25dBμ) 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust RV2 so that the TUNED indicator goes on.

Adjustment Location : main board

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by trimmer capacitors.

AM Section Adjustment

Setting :


AM RF signal generator
loop antenna A
loop antenna B
AM ANTENNA terminal (TM1)
set
30% amplitude modulation by 400Hz signal

AM Tuner Level Adjustment

Band : AM

Procedure :

1. Set loop antenna A so that the loop antenna B input level becomes 316 μV (50 dBμ).
2. Tune the set to 1050kHz.
3. Adjust RV1 so that the TUNED indicator goes on.

Adjustment Location : main board

SW OSC Voltage Adjustment

(Saudi Arabia Model Only)
BAND SELECT : SW

Procedure :

1. Connect the VOM to JW11.
2. Tune the set to 5.95MHz.
3. Adjust T2 for 0.9 to 1.1V reading on the VOM.
4. Tune the set to 17.90MHz.
5. Adjust CT2 for 8.3 to 8.7V reading on the VOM.

SW Tracking Adjustment

(Saudi Arabia Model Only)
BAND SELECT : SW

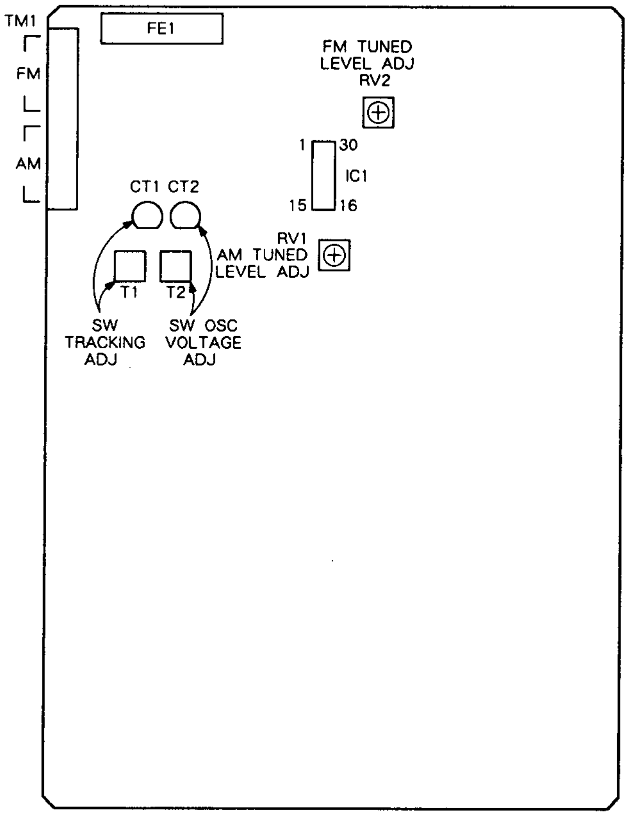
Procedure :

1. Connect the VOM to speaker terminal.
2. Adjust for a maximum reading on VOM.

Signal generator and Set frequency	Adjustment part
7.0MHz	T1
17.0MHz	CT1

Adjustment Location : main board

[MAIN BOARD] (Component Side)


TM1
FM
AM
FE1
FM TUNED LEVEL ADJ RV2
1
30
IC1
15
16
CT1 CT2
RV1
AM TUNED LEVEL ADJ
T1
T2
SW TRACKING ADJ
SW OSC VOLTAGE ADJ

SUBCARRIER ADJUSTMENT (CIS Model only)

SWITCH POSITION	Function Selector : TUNER Band Selector : FM STEREO/MONO : MONO				
SIGNAL GENERATOR	69 MHz, 60 dB, FM modulated (MONO SIGNAL)				
STEP	**TEST STAGE**	**FM TUNING FREQUENCY**	**SIGNAL GENERATOR**	**ADJUSTMENT**	**REMARKS**
1	fo	69 MHz	1 kHz (10 kHz dev.)		The value in this state should be 0 dB (Vo).
2			31.25 kHz (10 kHz dev.)	L1701	Adjust for maximal output.
3	Q			RV1701	Indication is +14 dB against Vo.

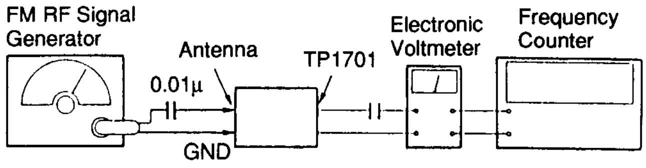

FM RF Signal Generator
Antenna
0.01μ
GND
TP1701
Electronic Voltmeter
Frequency Counter

Fig. 1 SUBCARRIER

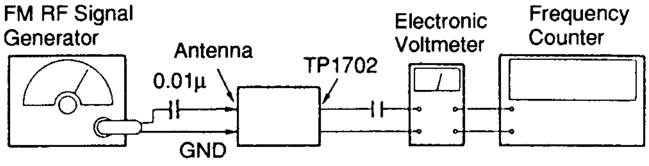

FM RF Signal Generator
Antenna
0.01μ
GND
TP1702
Electronic Voltmeter
Frequency Counter

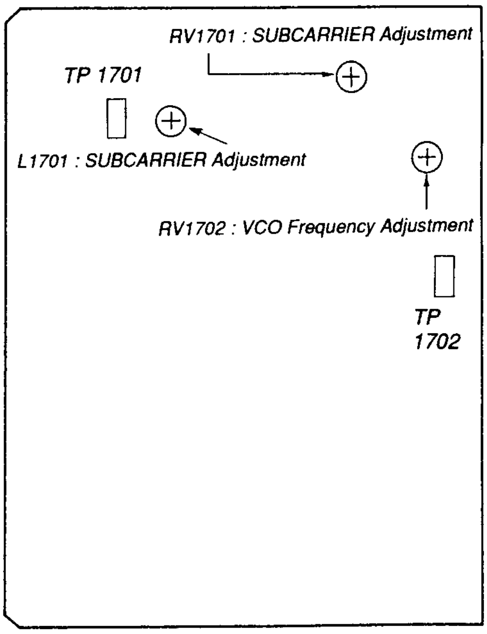
Fig. 2 VCO FREQUENCY

VCO FREQUENCY ADJUSTMENT

SWITCH POSITION	STEREO/MONO : STEREO		
SIGNAL GENERATOR	69 MHz, 60 dB, FM modulated (MONO SIGNAL)		
	FM TUNING FREQUENCY	**ADJUSTMENT**	**REMARKS**
	69 MHz	RV1702	Adjust for 31.25 kHz ± 50 Hz.

Adjustment Location : Polar board

[POLAR BOARD] (Component Side)

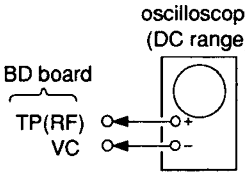

RV1701 : SUBCARRIER Adjustment
TP 1701
L1701 : SUBCARRIER Adjustment
RV1702 : VCO Frequency Adjustment
TP 1702

CD SECTION

Note :

1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

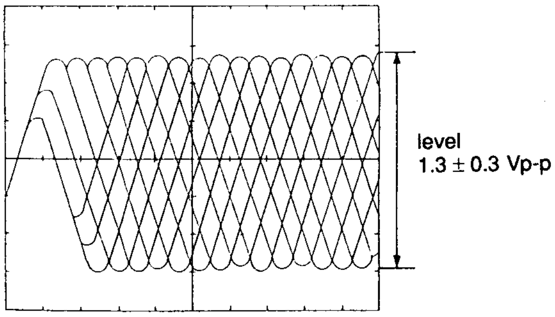
Focus Bias Adjustment



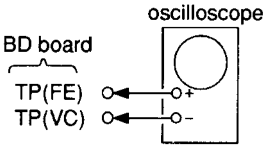
Procedure:

1. Connect oscilloscope to test point TP (RF). (GND terminal : VC)
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Adjust RV101 so that the waveform is clear.
   (Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.)
5. After adjustment, check the RF signal level.

- RF signal
  VOLT/DIV : 200 mV
  TIME/DIV : 500 nS



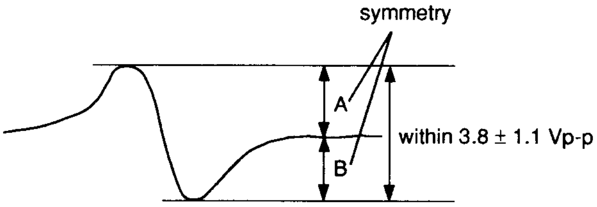
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO).
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3.8±1.1 Vp-p.

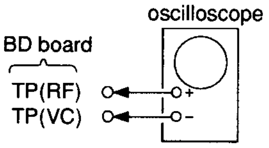
S-curve waveform



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check



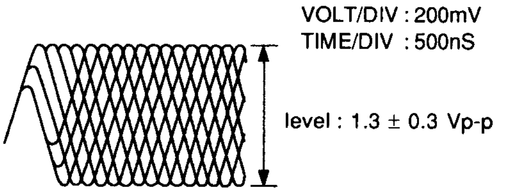
Procedure :

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

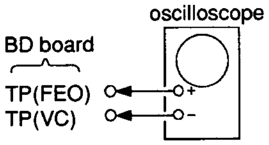
Note :

Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform

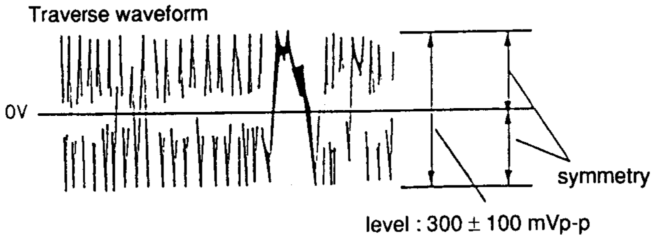


E-F Balance Check


oscilloscope
BD board
TP(FEO)
TP(VC)
+
-

Procedure :

1. Connect pin (56) of IC101 to GND with a lead wire.
2. Connect oscilloscpe to test point TP (TEO).
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0Vdc, and check this level.


Traverse waveform
0V
symmetry
level : 300 ± 100 mVp-p

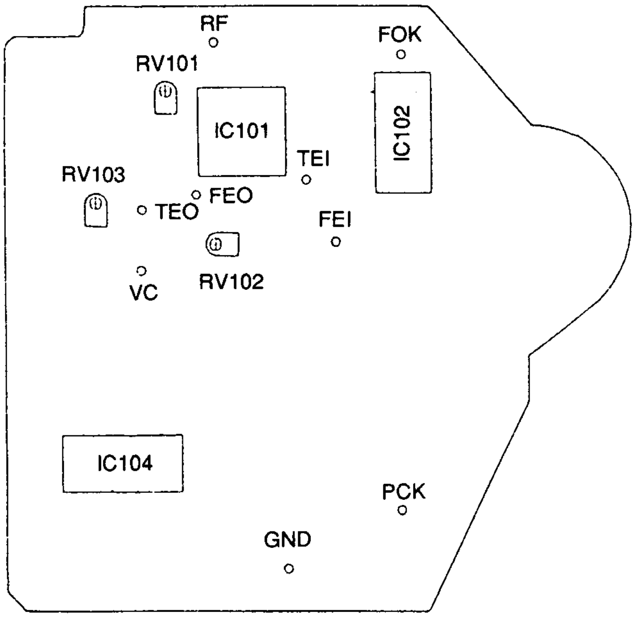
6. Remove the lead wire connected in step 1.

Focus/Tracking Gain Adjustment (RV102, RV103)

This gain has a margin, so even if it is slightly off.
There is no problem.
Therfore, do not perform this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

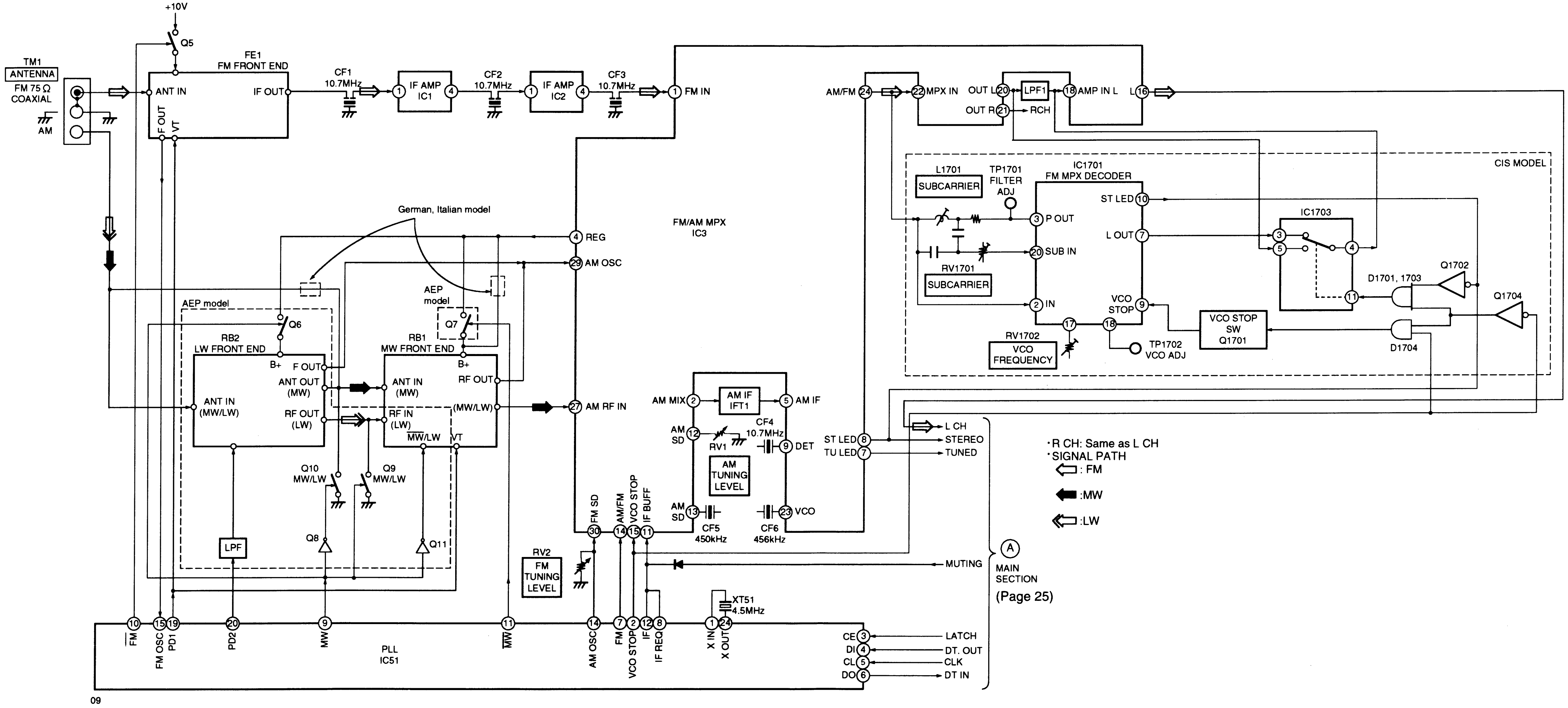
Adjustment Location :

[BD BOARD] (Conductor Side)

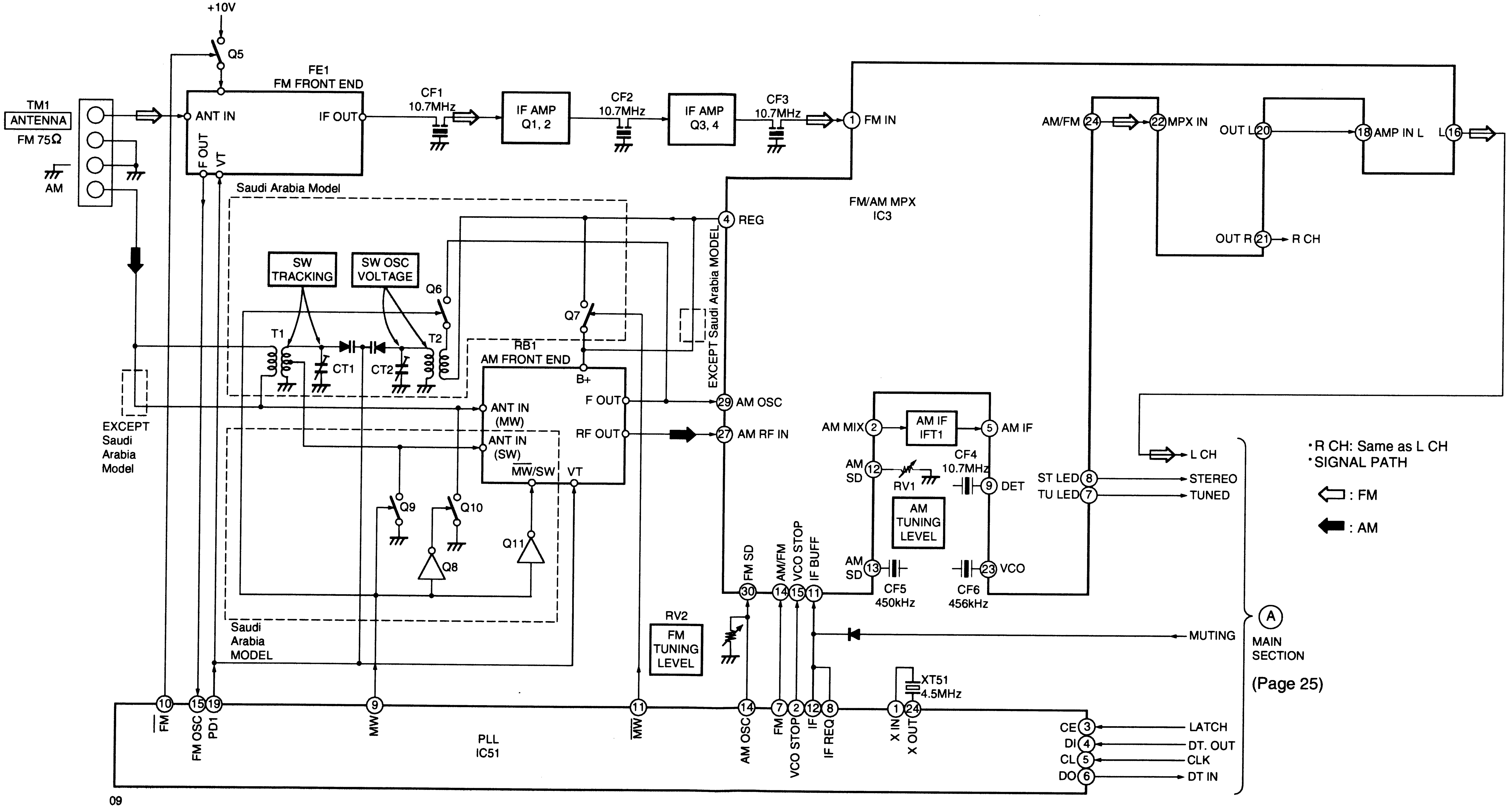

RF
FOK
RV101
IC101
IC102
TEI
RV103
FEO
TEO
FEI
VC
RV102
IC104
PCK
GND

SECTION 6
DIAGRAMS

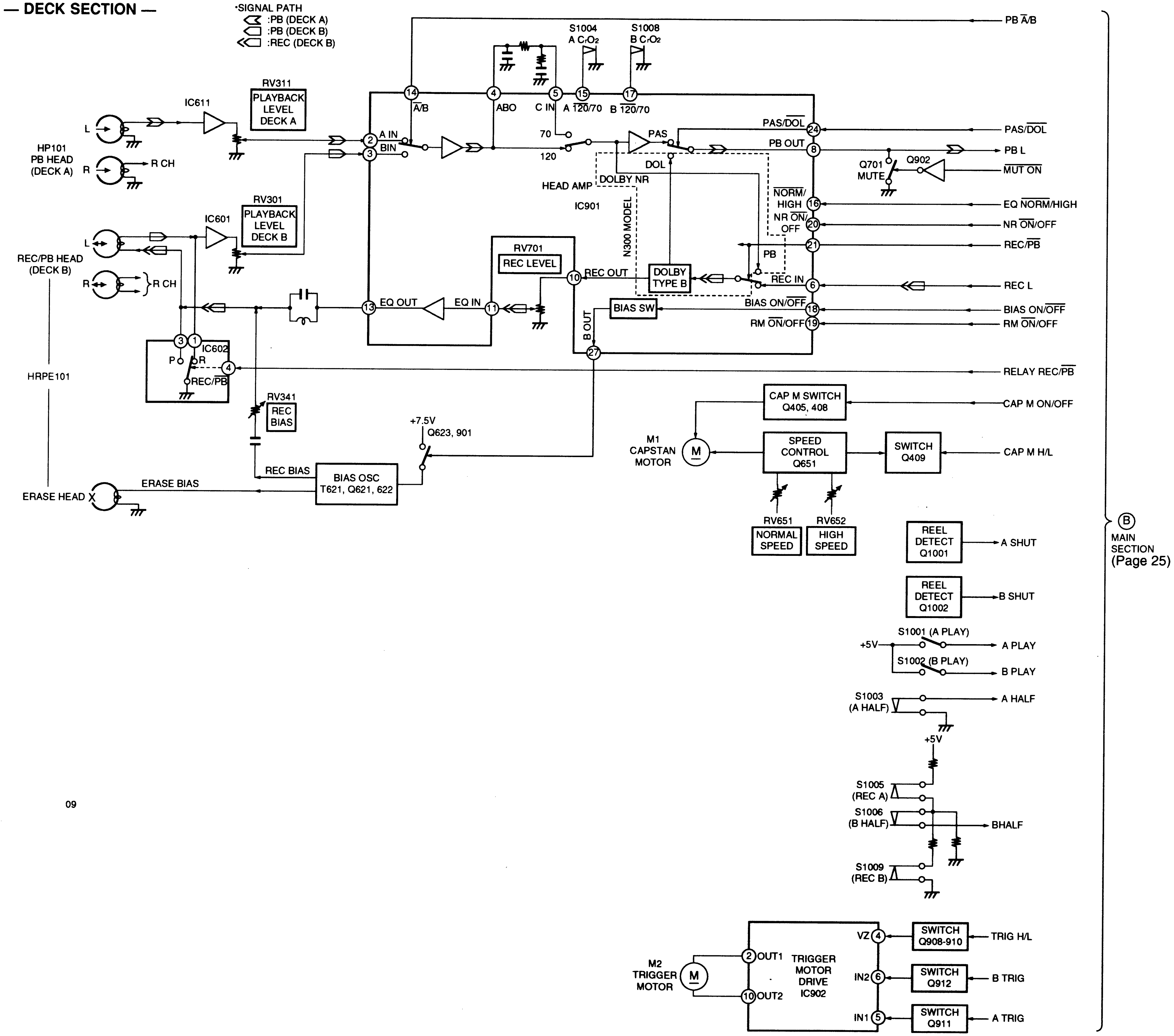
6-1. BLOCK DIAGRAM — TUNER SECTION — (N300 model)


+10V
Q5
TM1
ANTENNA
FM 75 Ω
COAXIAL
AM
FE1
FM FRONT END
ANT IN
IF OUT
F OUT
VT
CF1
10.7MHz
IF AMP
IC1
CF2
10.7MHz
IF AMP
IC2
CF3
10.7MHz
FM IN
German, Italian model
AEP model
AEP
model
Q6
Q7
RB2
LW FRONT END
B+
F OUT
ANT OUT
(MW)
ANT IN
(MW/LW)
RF OUT
(LW)
RB1
MW FRONT END
B+
ANT IN
(MW)
RF OUT
RF IN
(LW)
(MW/LW)
MW/LW
VT
Q10
MW/LW
Q9
MW/LW
Q8
Q11
LPF
REG
AM OSC
FM/AM MPX
IC3
AM RF IN
AM MIX
AM IF
IFT1
AM IF
AM
SD
RV1
CF4
10.7MHz
DET
AM
TUNING
LEVEL
AM
SD
CF5
450kHz
CF6
456kHz
VCO
FM SD
AM/FM
VCO STOP
IF BUFF
RV2
FM
TUNING
LEVEL
XT51
4.5MHz
FM
FM OSC
PD1
PD2
MW
PLL
IC51
MW
AM OSC
FM
VCO STOP
IF
IF REQ
X IN
X OUT
CE
DI
CL
DO
09
AM/FM
MPX IN
OUT L
OUT R
LPF1
RCH
AMP IN L
L
CIS MODEL
L1701
SUBCARRIER
TP1701
FILTER
ADJ
IC1701
FM MPX DECODER
ST LED
P OUT
L OUT
SUB IN
RV1701
SUBCARRIER
IN
VCO
STOP
RV1702
VCO
FREQUENCY
TP1702
VCO ADJ
IC1703
VCO STOP
SW
Q1701
D1701, 1703
Q1702
Q1704
D1704
ST LED
TU LED
L CH
STEREO
TUNED
MUTING
LATCH
DT. OUT
CLK
DT IN
A
MAIN
SECTION
(Page 25)
·R CH: Same as L CH
·SIGNAL PATH
: FM
:MW
:LW

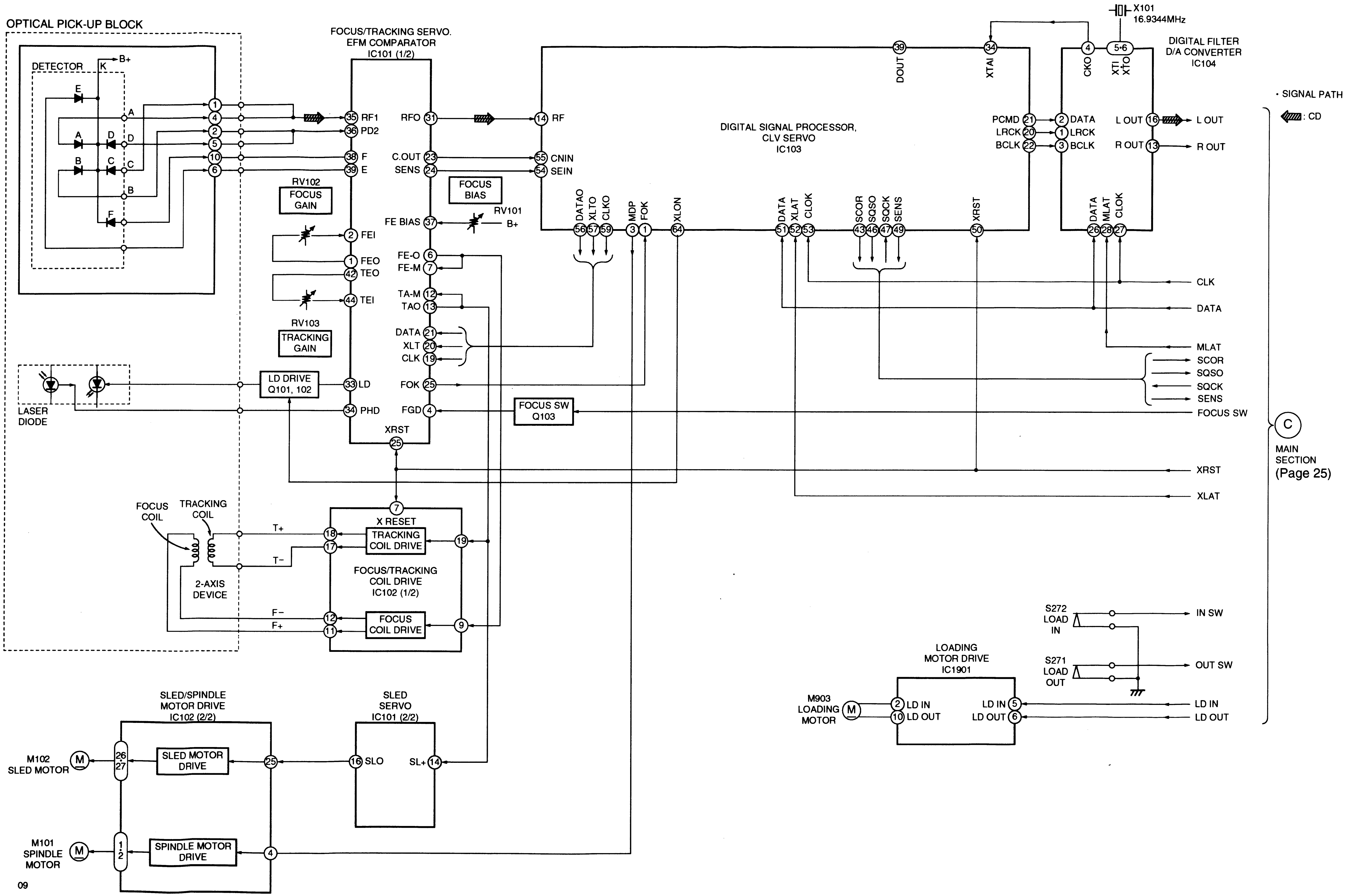
6-2. BLOCK DIAGRAM — TUNER SECTION — (N300K model)


+10V
Q5
FE1
FM FRONT END
TM1
ANTENNA
FM 75Ω
AM
ANT IN
IF OUT
F OUT
VT
CF1
10.7MHz
IF AMP
Q1, 2
CF2
10.7MHz
IF AMP
Q3, 4
CF3
10.7MHz
FM IN
Saudi Arabia Model
REG
FM/AM MPX
IC3
EXCEPT Saudi Arabia MODEL
SW TRACKING
SW OSC VOLTAGE
Q6
Q7
T1
T2
CT1
CT2
RB1
AM FRONT END
B+
ANT IN (MW)
ANT IN (SW)
MW/SW
VT
F OUT
RF OUT
AM OSC
AM RF IN
EXCEPT Saudi Arabia Model
Q9
Q10
Q11
Q8
Saudi Arabia MODEL
AM/FM
MPX IN
OUT L
AMP IN L
L
OUT R
R CH
AM MIX
AM IF IFT1
AM IF
CF4
10.7MHz
AM SD
RV1
DET
AM TUNING LEVEL
AM SD
CF5
450kHz
CF6
456kHz
VCO
ST LED
TU LED
L CH
STEREO
TUNED
FM SD
AM/FM
VCO STOP
IF BUFF
RV2
FM TUNING LEVEL
MUTING
XT51
4.5MHz
FM
FM OSC
PD1
MW
PLL
IC51
MW
AM OSC
FM
VCO STOP
IF
IF REQ
X IN
X OUT
CE
DI
CL
DO
LATCH
DT. OUT
CLK
DT IN
A
MAIN SECTION
(Page 25)
•R CH: Same as L CH
•SIGNAL PATH
⇦ : FM
⬅ : AM
09

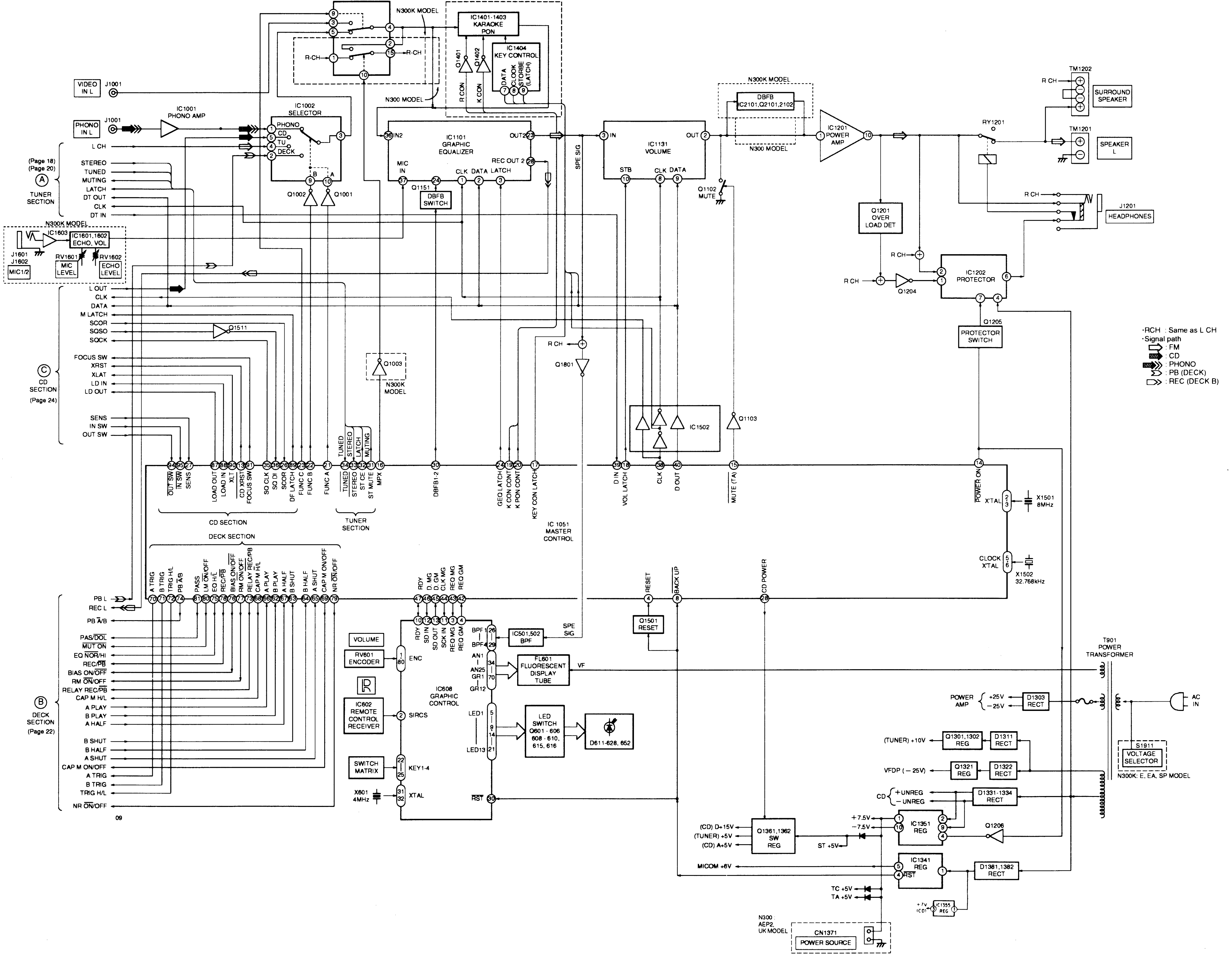
6-3. BLOCK DIAGRAM — DECK SECTION —


•SIGNAL PATH
:PB (DECK A)
:PB (DECK B)
:REC (DECK B)
HP101
PB HEAD
(DECK A)
L
R
R CH
IC611
RV311
PLAYBACK LEVEL DECK A
REC/PB HEAD
(DECK B)
R CH
IC601
RV301
PLAYBACK LEVEL DECK B
HRPE101
IC602
P
R
REC/PB
RV341
REC BIAS
REC BIAS
BIAS OSC
T621, Q621, 622
ERASE HEAD
ERASE BIAS
+7.5V
Q623, 901
A IN
BIN
EQ OUT
EQ IN
RV701
REC LEVEL
A/B
ABO
C IN
A 120/70
B 120/70
S1004
A CrO2
S1008
B CrO2
70
120
HEAD AMP
IC901
DOLBY NR
N300 MODEL
PAS
DOL
DOLBY TYPE B
REC OUT
B OUT
BIAS SW
PAS/DOL
PB OUT
NORM/HIGH
NR ON/OFF
PB
REC IN
BIAS ON/OFF
RM ON/OFF
Q701
MUTE
Q902
PB A/B
PAS/DOL
PB L
MUT ON
EQ NORM/HIGH
NR ON/OFF
REC/PB
REC L
BIAS ON/OFF
RM ON/OFF
RELAY REC/PB
CAP M SWITCH
Q405, 408
CAP M ON/OFF
M1
CAPSTAN MOTOR
SPEED CONTROL
Q651
SWITCH
Q409
CAP M H/L
RV651
NORMAL SPEED
RV652
HIGH SPEED
REEL DETECT
Q1001
A SHUT
REEL DETECT
Q1002
B SHUT
+5V
S1001 (A PLAY)
A PLAY
S1002 (B PLAY)
B PLAY
S1003
(A HALF)
A HALF
+5V
S1005
(REC A)
S1006
(B HALF)
BHALF
S1009
(REC B)
M2
TRIGGER MOTOR
OUT1
OUT2
TRIGGER MOTOR DRIVE
IC902
VZ
IN2
IN1
SWITCH
Q908-910
TRIG H/L
SWITCH
Q912
B TRIG
SWITCH
Q911
A TRIG
B
MAIN SECTION
(Page 25)
09

6-4. BLOCK DIAGRAM — CD SECTION —


OPTICAL PICK-UP BLOCK
DETECTOR
K
B+
E
A
D
B
C
F
LASER DIODE
FOCUS/TRACKING SERVO.
EFM COMPARATOR
IC101 (1/2)
RF1
PD2
F
E
RFO
C.OUT
SENS
RV102
FOCUS GAIN
FOCUS BIAS
RV101
B+
FE BIAS
FEI
FEO
TEO
TEI
FE-O
FE-M
TA-M
TAO
RV103
TRACKING GAIN
DATA
XLT
CLK
LD DRIVE
Q101, 102
LD
PHD
FOK
FGD
XRST
FOCUS SW
Q103
DIGITAL SIGNAL PROCESSOR,
CLV SERVO
IC103
RF
CNIN
SEIN
DATAO
XLTO
CLKO
MDP
FOK
XLON
DATA
XLAT
CLOK
SCOR
SQSO
SQCK
SENS
XRST
DOUT
XTAI
PCMD
LRCK
BCLK
X101
16.9344MHz
DIGITAL FILTER
D/A CONVERTER
IC104
CKO
XTI
XTO
DATA
LRCK
BCLK
L OUT
R OUT
DATA
MLAT
CLOK
• SIGNAL PATH
▨ : CD
CLK
DATA
MLAT
SCOR
SQSO
SQCK
SENS
FOCUS SW
XRST
XLAT
C
MAIN SECTION
(Page 25)
FOCUS COIL
TRACKING COIL
2-AXIS DEVICE
T+
T−
F−
F+
X RESET
TRACKING COIL DRIVE
FOCUS/TRACKING
COIL DRIVE
IC102 (1/2)
FOCUS COIL DRIVE
S272
LOAD IN
IN SW
S271
LOAD OUT
OUT SW
LOADING
MOTOR DRIVE
IC1901
M903
LOADING MOTOR
LD IN
LD OUT
SLED/SPINDLE
MOTOR DRIVE
IC102 (2/2)
SLED MOTOR DRIVE
SPINDLE MOTOR DRIVE
M102
SLED MOTOR
M101
SPINDLE MOTOR
SLED
SERVO
IC101 (2/2)
SLO
SL+
09

6-5. BLOCK DIAGRAM — MAIN SECTION —


IC1003
N300K MODEL
IC1401-1403 KARAOKE PON
IC1404 KEY CONTROL
Q1401
Q1402
R CON
K CON
DATA
CLOCK STROBE (LATCH)
N300 MODEL
R-CH
VIDEO IN L
J1001
IC1001 PHONO AMP
PHONO IN L
IC1002 SELECTOR
PHONO
CD
TU
DECK
Q1002
Q1001
L CH
(Page 18)
(Page 20)
A
TUNER SECTION
STEREO
TUNED
MUTING
LATCH
DT OUT
CLK
DT IN
N300K MODEL
IC1603
IC1601,1602 ECHO. VOL
J1601
J1602
MIC1/2
RV1601 MIC LEVEL
RV1602 ECHO LEVEL
IC1101 GRAPHIC EQUALIZER
IN2
OUT2
MIC IN
REC OUT 2
CLK DATA LATCH
Q1151 DBFB SWITCH
SPE SIG
IC1131 VOLUME
IN
OUT
STB
CLK DATA
Q1102 MUTE
N300K MODEL
DBFB IC2101,Q2101,2102
N300 MODEL
IC1201 POWER AMP
RY1201
R CH
TM1202
SURROUND SPEAKER
TM1201
SPEAKER L
J1201
HEADPHONES
Q1201 OVER LOAD DET
Q1204
IC1202 PROTECTOR
Q1205 PROTECTOR SWITCH
L OUT
CLK
DATA
M LATCH
SCOR
SQSO
SQCK
Q1511
C
CD SECTION
(Page 24)
FOCUS SW
XRST
XLAT
LD IN
LD OUT
SENS
IN SW
OUT SW
Q1003
N300K MODEL
Q1801
IC1502
Q1103
OUT SW
IN SW
SENS
LOAD OUT
LOAD IN
XLT
CD XRST
FOCUS SW
SQ CLK
SQ DI
SCOR
DF LATCH
FUNC C
FUNC B
FUNC A
TUNED
STEREO
ST CE
ST MUTE
MPX
DBFB1-2
GEQ LATCH
K CON CONT
K PON CONT
KEY CON LATCH
D IN
VOL LATCH
CLK
D OUT
MUTE (TA)
POWER ON
XTAL
X1501 8MHz
CLOCK XTAL
X1502 32.768kHz
CD SECTION
TUNER SECTION
IC 1051 MASTER CONTROL
DECK SECTION
A TRIG
B TRIG
TRIG H/L
PB A/B
PASS
LM ON/OFF
EQ H/L
REC/PB
BIAS ON/OFF
RM ON/OFF
RELAY REC/PB
CAP M H/L
A PLAY
B PLAY
A HALF
B SHUT
B HALF
A SHUT
CAP M ON/OFF
NR ON/OFF
RDY
D MG
D GM
CLK MG
REQ MG
REQ GM
RESET
BACK UP
CD POWER
PB L
REC L
PB A/B
PAS/DOL
MUT ON
EQ NOR/HI
REC/PB
BIAS ON/OFF
RM ON/OFF
RELAY REC/PB
CAP M H/L
A PLAY
B PLAY
A HALF
B SHUT
B HALF
A SHUT
CAP M ON/OFF
A TRIG
B TRIG
TRIG H/L
NR ON/OFF
B
DECK SECTION
(Page 22)
09
VOLUME
RV601 ENCODER
ENC
R
IC602 REMOTE CONTROL RECEIVER
SIRCS
SWITCH MATRIX
KEY1-4
X601 4MHz
XTAL
IC608 GRAPHIC CONTROL
RDY
SD IN
SD OUT
SCK IN
REQ MG
REQ GM
BPF1
BPF4
AN1
AN25
GR1
GR12
LED1
LED13
RST
IC501,502 BPF
SPE SIG
FL601 FLUORESCENT DISPLAY TUBE
VF
LED SWITCH Q601-606 608-610, 615, 616
D611-628, 652
Q1501 RESET
T901 POWER TRANSFORMER
AC IN
POWER AMP
+25V
−25V
D1303 RECT
(TUNER) +10V
Q1301,1302 REG
D1311 RECT
VFDP (−25V)
Q1321 REG
D1322 RECT
S1911 VOLTAGE SELECTOR
N300K: E, EA, SP MODEL
CD
+UNREG
−UNREG
D1331-1334 RECT
+7.5V
−7.5V
IC1351 REG
Q1206
(CD) D+15V
(TUNER) +5V
(CD) A+5V
Q1361,1362 SW REG
ST +5V
MICOM +6V
IC1341 REG
RST
D1381,1382 RECT
TC +5V
TA +5V
+7V (CD)
IC1355 REG
N300 AEP2, UK MODEL
CN1371 POWER SOURCE
·RCH : Same as L CH
·Signal path
⇨ : FM
▨ : CD
▶ : PHONO
⊳ : PB (DECK)
▷ : REC (DECK B)

6-6. CIRCUIT

PA

H.

ECH
(N300

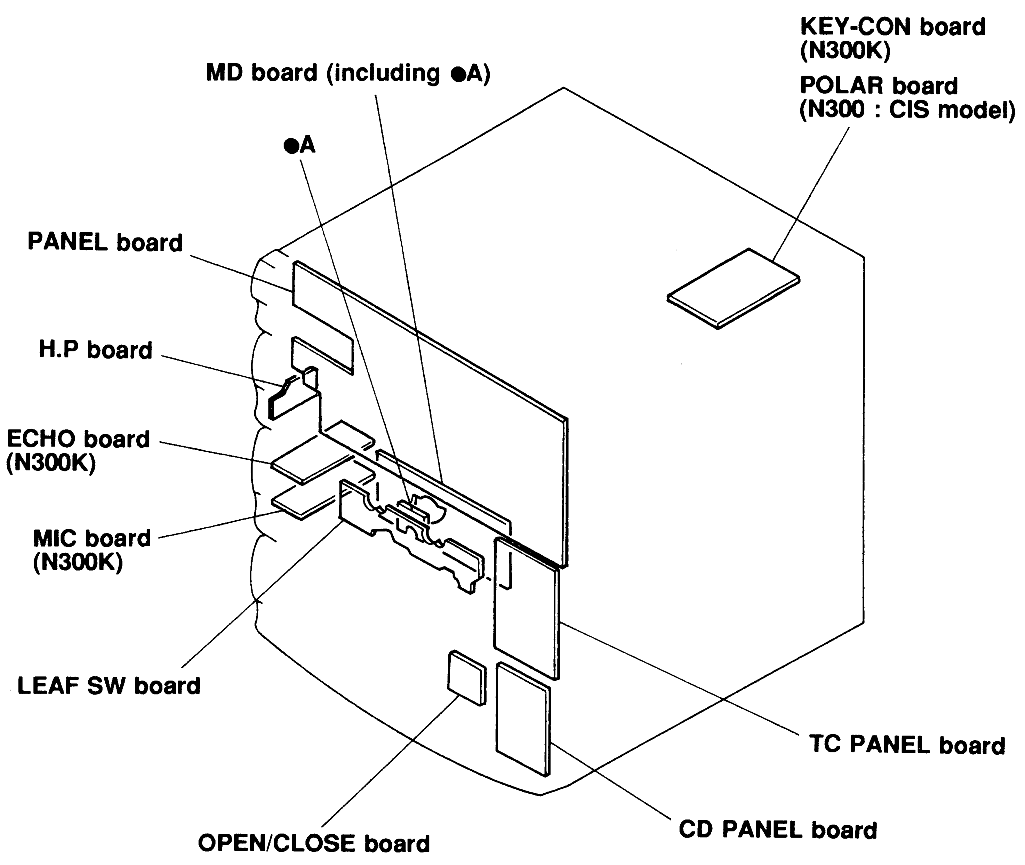
MI
(N3

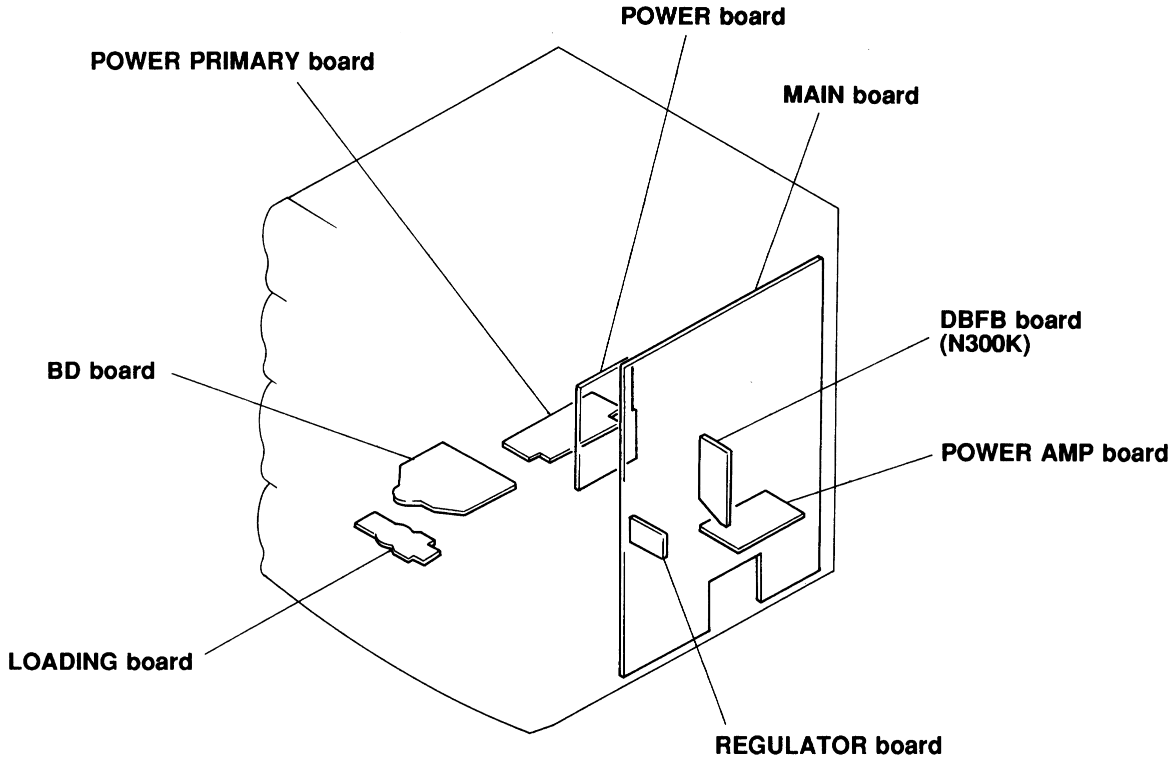
LEA

E

LOA

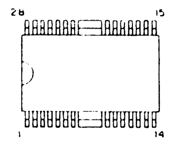
6-6. CIRCUIT BOARDS LOCATION


KEY-CON board
(N300K)
POLAR board
(N300 : CIS model)
MD board (including ●A)
●A
PANEL board
H.P board
ECHO board
(N300K)
MIC board
(N300K)
LEAF SW board
TC PANEL board
OPEN/CLOSE board
CD PANEL board

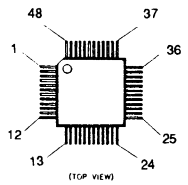

POWER board
POWER PRIMARY board
MAIN board
DBFB board
(N300K)
BD board
POWER AMP board
LOADING board
REGULATOR board

6-7. SEMICONDUCTOR LEAD LAYOUTS

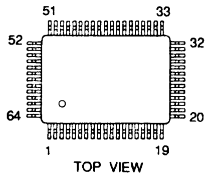
BA6397FP



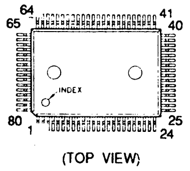
CXA1782BQ


48
37
1
36
12
25
13
24
(TOP VIEW)

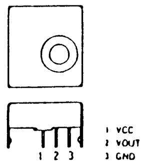
CXD2507AQ


51
33
52
32
64
20
1
19
TOP VIEW

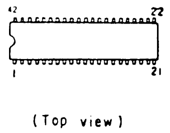
CXP82612-009Q


64
65
41
40
INDEX
80
1
25
24
(TOP VIEW)

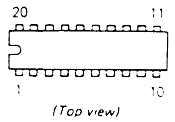
GP1U50XB


1 VCC
2 VOUT
3 GND
1 2 3

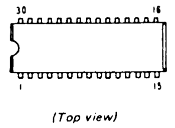
HA12195
HA12196


42
22
1
21
(Top view)

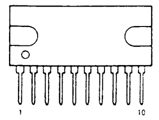
IR3R42


20
11
1
10
(Top view)

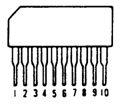
LA1835
M65840SP


30
16
1
15
(Top view)

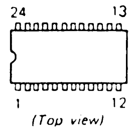
LA5618



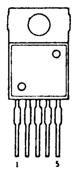
LB1641


1 2 3 4 5 6 7 8 9 10

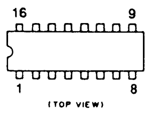
LC72130
M65843P


24
13
1
12
(Top view)

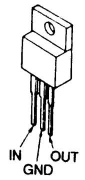
L78MR06



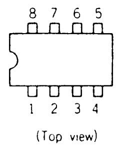
MC14052BCP
MC14053BCP
TC9210P
μPD4053BC


16
9
1
8
(TOP VIEW)

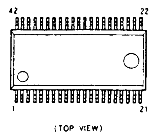
M5F7807



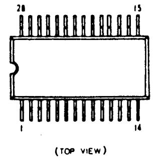
M5218AP
μPC4570C-1


8 7 6 5
1 2 3 4
(Top view)

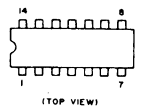
M62423FP


42
22
1
21
(TOP VIEW)

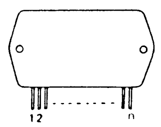
PCM1710U


28
15
1
14
(TOP VIEW)

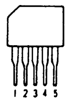
SN74HCU04ANS-E20


14
8
1
7
(TOP VIEW)

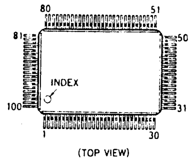
STK-4142MK2
STK-4152MK2



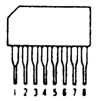
TA7060AP



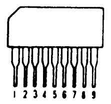
TMP87CP64F-6254


80
51
81
50
INDEX
100
31
1
30
(TOP VIEW)

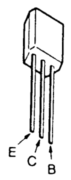
μPC1237HA



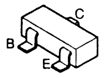
μPC1330HA



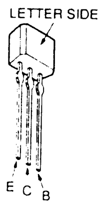
DTA124ES
DTA144ES
DTC114ES
DTC124ES
DTC144ES
2SC2669-OY



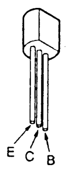
MSB710
UN2111
UN2211



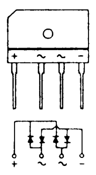
UN4111
2SA1175-HFE
2SC2785-HFE
2SC403SP


LETTER SIDE
E
C
B

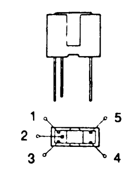
2SB1116-L
2SC1841-PAFAEA
2SC2001-LK
2SD1387
2SD1616A-K



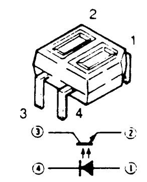
D3SBA20-4101



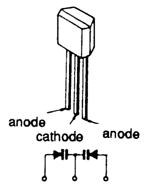
GP-1A521



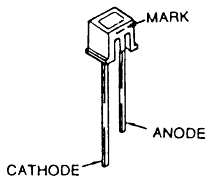
NJL5165K



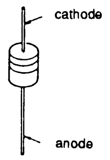
KV1560N


anode
cathode
anode

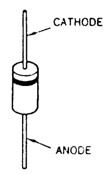
SEL5221S-TH8F
SEL5421E-TH8F
SEL5921A-TH8F
SEL58420C-TP


MARK
ANODE
CATHODE

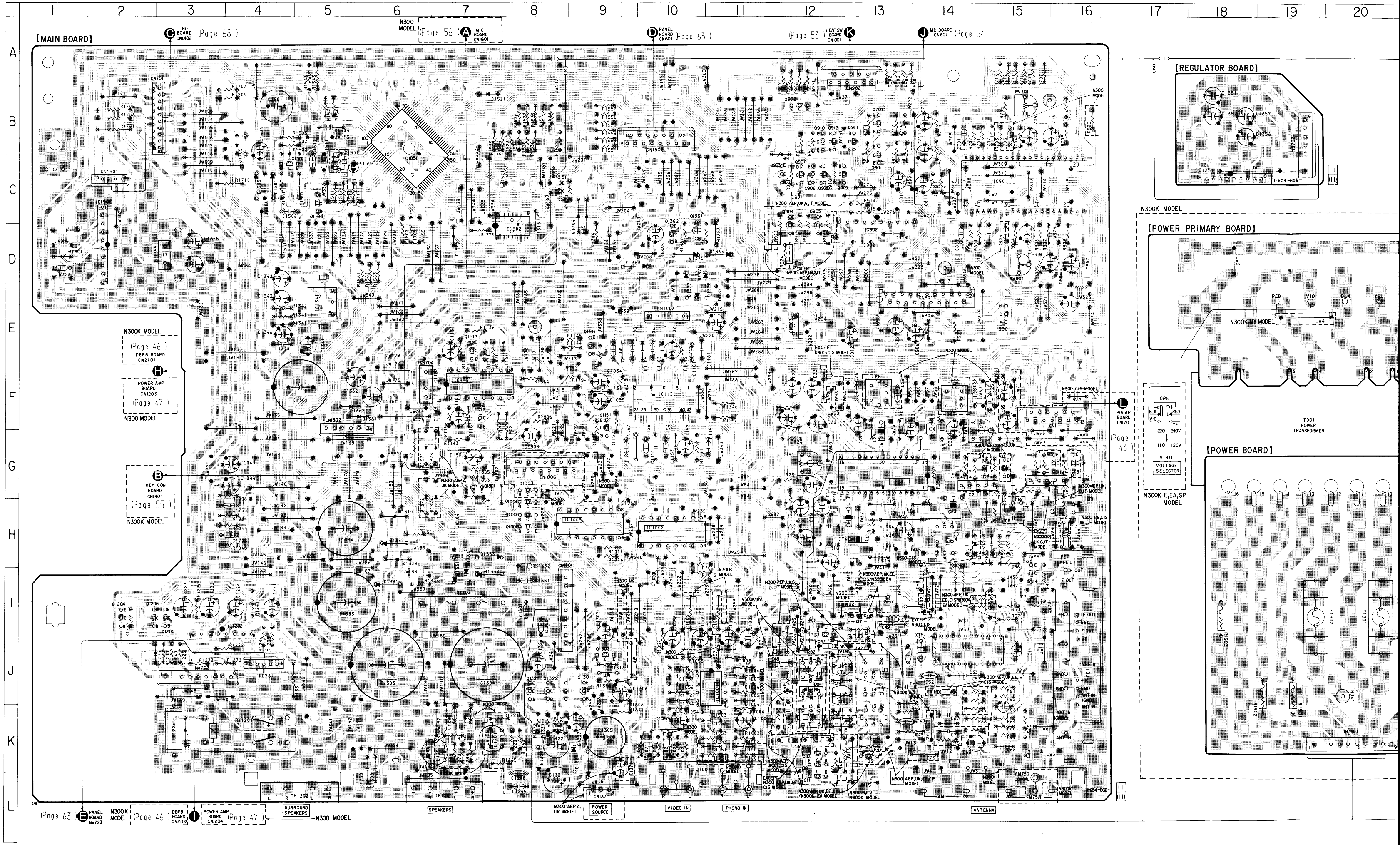
HZS7B2L
HZS9A2L
HZS27-2L
RD5.6JSB
UZ-2.7BSA
UZ4.7BSB
UZL-11M1
11ES2

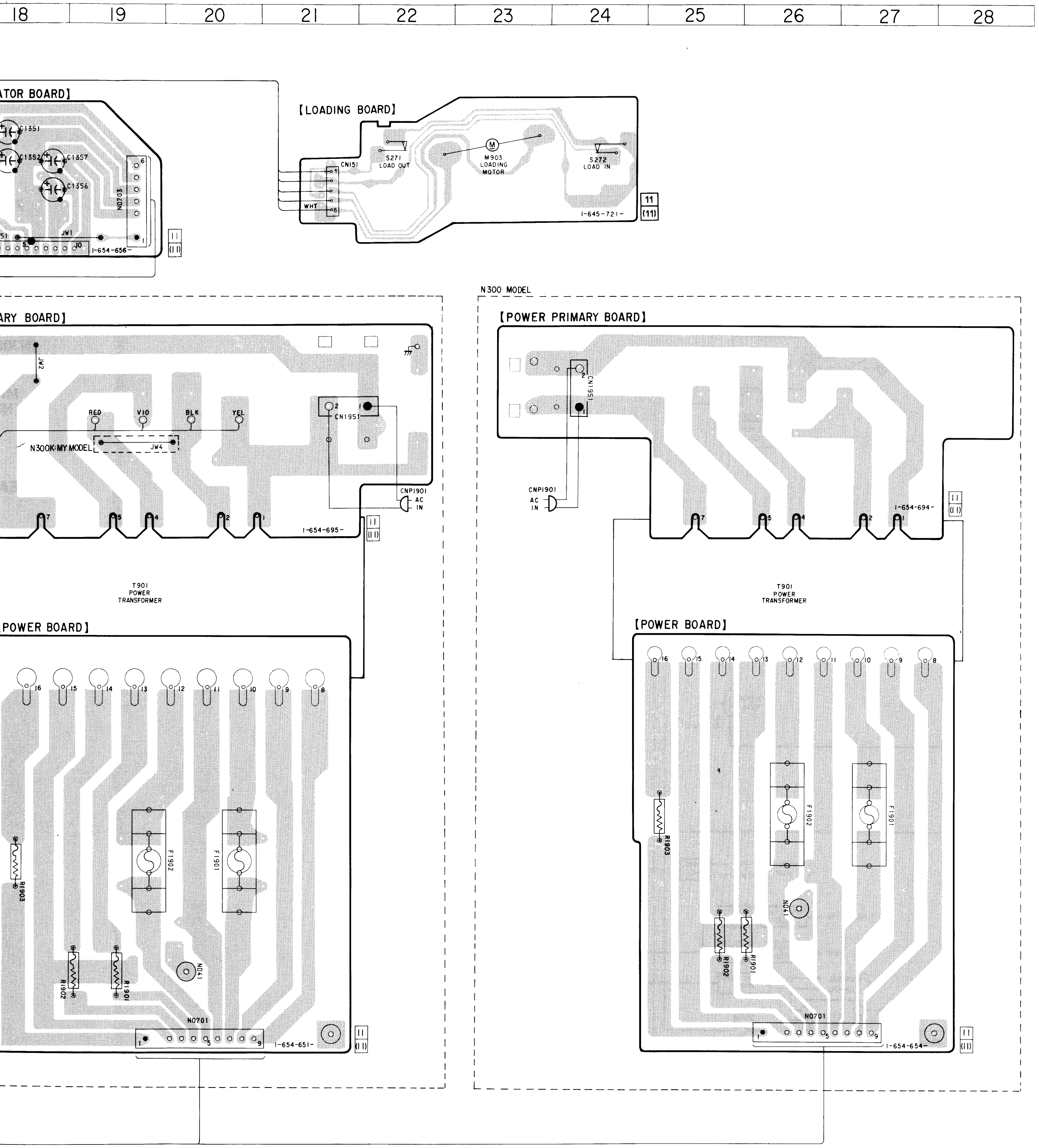

cathode
anode

1N4148M
10E2


CATHODE
ANODE

6-8. PRINTED WIRING BOARD — MAIN SECTION — • See page 27 for Circuit Boards Location. • See page 28 for Semiconductor Lead Layouts.


【MAIN BOARD】
【REGULATOR BOARD】
N300K MODEL
【POWER PRIMARY BOARD】
【POWER BOARD】
BD BOARD CN1102 (Page 68)
N300 MODEL (Page 56) MIC BOARD CN1601
PANEL BOARD CN601 (Page 63)
(Page 53) LEAF SW BOARD CN1001
MD BOARD CN601 (Page 54)
N300K MODEL (Page 46) DBFB BOARD CN2101
POWER AMP BOARD CN1203 (Page 47) N300 MODEL
KEY CON BOARD CN1401 (Page 55) N300K MODEL
N300-C/S MODEL POLAR BOARD CN1701 (Page 43)
(Page 63) PANEL BOARD No723
N300K MODEL (Page 46) DBFB BOARD CN2102
POWER AMP BOARD CN1204 (Page 47)
SURROUND SPEAKERS N300 MODEL
SPEAKERS
N300-AEP2, UK MODEL
POWER SOURCE
VIDEO IN
PHONO IN
ANTENNA
FM75Ω COAXIAL
AM
T901 POWER TRANSFORMER
S1911 VOLTAGE SELECTOR
220-240V
110-120V
N300K:E,EA,SP MODEL
N300K-MY MODEL
RED
VIO
BLK
YEL
ORG
IC1051
IC1502
IC1901
IC1131
IC1101
IC1003
IC1002
IC902
IC901
IC3
IC51
D1303
RY1201
C1303
C1304
C1333
C1334
C1361
C1305
F1901
F1902
1-654-656-
1-654-660-
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
A B C D E F G H I J K L


18
19
20
21
22
23
24
25
26
27
28
ATOR BOARD]
C1351
C1352
C1357
C1356
N0703
JW1
1-654-656-
[LOADING BOARD]
CN151
WHT
S271
LOAD OUT
M903
LOADING
MOTOR
S272
LOAD IN
1-645-721-
11
(11)
ARY BOARD]
JW2
RED
VIO
BLK
YEL
CN1951
N300K·MY MODEL
JW4
CNP1901
AC
IN
1-654-695-
N300 MODEL
[POWER PRIMARY BOARD]
CN1951
CNP1901
AC
IN
1-654-694-
T901
POWER
TRANSFORMER
POWER BOARD]
[POWER BOARD]
F1902
F1901
R1903
R1902
R1901
ND41
N0701
1-654-651-
1-654-654-

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	H-14	IC1101	F-10
D2	I-14	IC1131	F-7
D3	H-14	IC1202	J-4
D5	J-12	IC1341	E-5
D901	C-12	IC1355	D-3
D1204	K-3	IC1502	D-8
D1205	J-2	IC1901	D-2
D1303	I-7		
D1306	J-9	Q1	G-16
D1309	H-6	Q2	G-16
D1310	H-6	Q3	G-15
D1311	K-9	Q4	G-15
D1321	K-9	Q5	I-15
D1322	K-8	Q6	I-12
D1323	K-8	Q7	I-13
D1331	I-7	Q8	K-12
D1332	I-7	Q9	K-13
D1333	I-7	Q10	K-12
D1334	I-7	Q11	K-12
D1341	E-4	Q701	B-13
D1361	F-5	Q801	C-13
D1362	F-5	Q901	E-15
D1363	D-10	Q902	B-12
D1364	D-11	Q903	C-12
D1371	G-6	Q904	D-12
D1372	G-6	Q905	D-12
D1373	G-5	Q906	C-12
D1374	H-6	Q907	C-12
D1375	D-9	Q908	C-12
D1376	E-10	Q909	C-12
D1377	E-10	Q910	B-12
D1378	E-10	Q911	B-13
D1381	I-6	Q912	B-12
D1382	H-6	Q1001	H-8
D1383	D-11	Q1002	H-8
D1501	C-4	Q1003	H-8
D1502	C-5	Q1004	H-8
D1503	C-4	Q1101	E-9
D1511	C-9	Q1102	F-7
D1521	B-7	Q1103	C-5
D1525	D-6	Q1151	G-9
D1704	C-9	Q1152	G-7
D1705	B-4	Q1204	I-2
D1901	D-1	Q1205	I-2
		Q1206	I-2
IC1	G-16	Q1301	J-9
IC2	G-14	Q1303	J-9
IC3	G-13	Q1321	J-8
IC51	J-14	Q1322	J-8
IC901	C-15	Q1361	D-10
IC902	D-13	Q1362	D-10
IC1001	J-11	Q1501	C-4
IC1002	H-10	Q1511	C-8
IC1003	H-9	Q1801	H-7
IC1051	C-6		

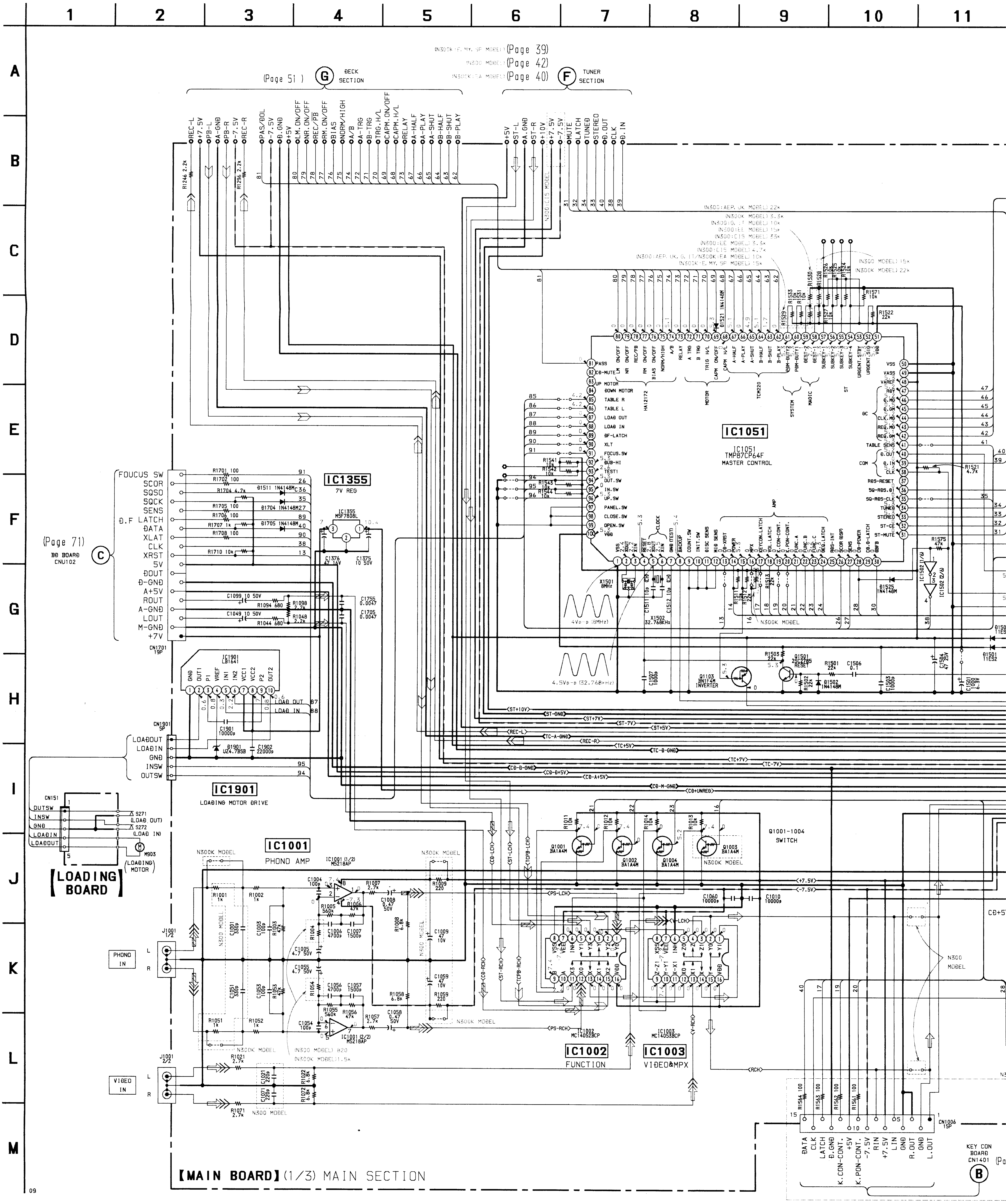
Note:

- ■ : parts mounted on the conductor side.
- △ : internal component.
- ▨ : Pattern from the side which enable seeing.
- Abbreviation

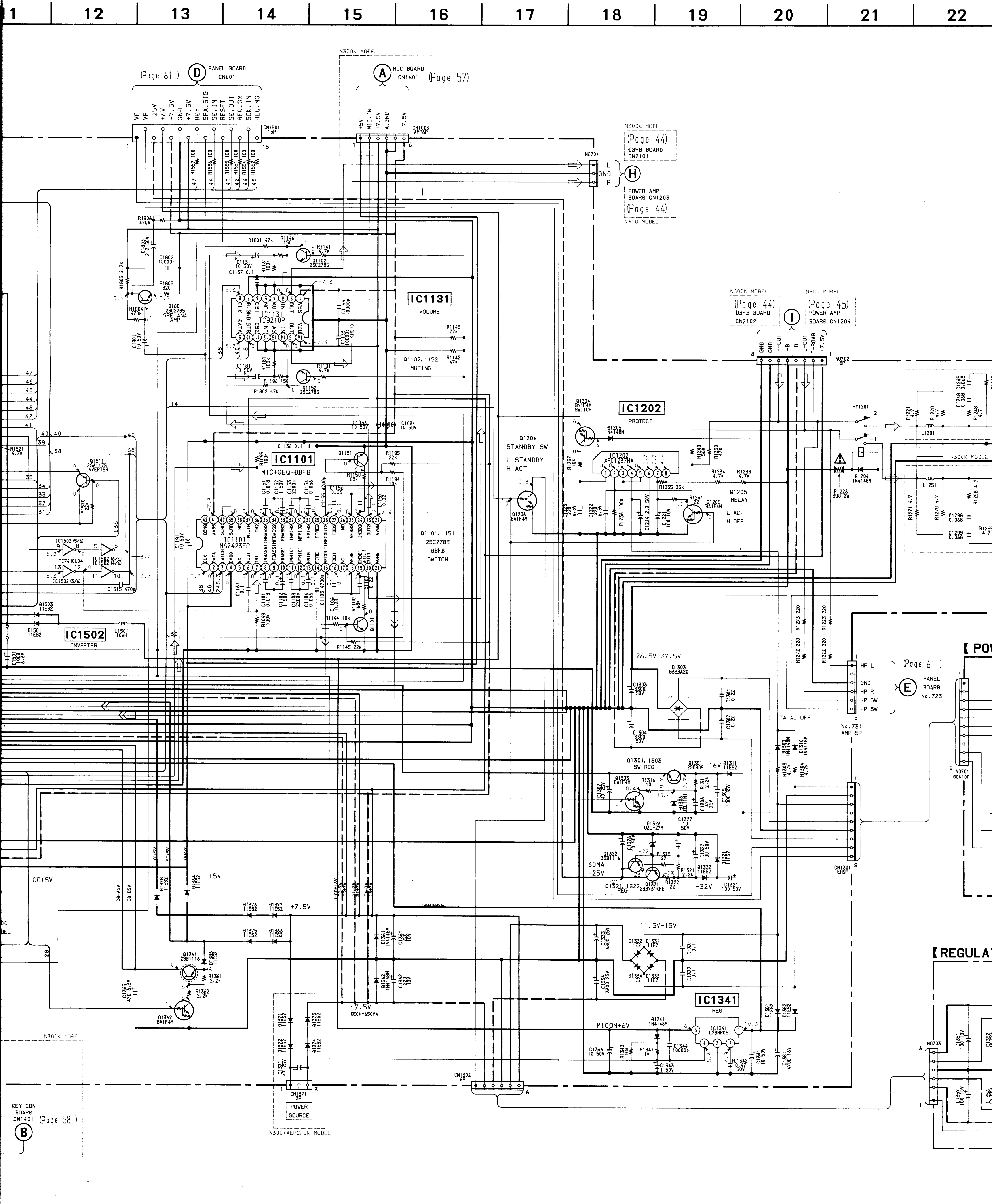
G : German model.
IT : Italian model.
EE : East European model.
EA : Saudi Arabia model.
SP : Singapore model.
MY : Malaysia model.

6-9. SCHEMATIC DIAGRAM — MAIN SECTION —

- See page 75 for IC Block Diagrams. (IC1002, 1003, 1101, 1131, 1202, 1351, 1901)
- See page 77 for IC Pin Functions. (IC1051)



1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M
(Page 51) G DECK SECTION
(N300K:E, MY, SP MODEL) (Page 39)
(N300 MODEL) (Page 42)
(N300K:FA MODEL) (Page 40)
F TUNER SECTION
REC-L
+7.5V
PB-L
A-GND
PB-R
-7.5V
REC-R
PAS/DOL
-7.5V
D.GND
+5V
LM.ON/OFF
NR.ON/OFF
REC/PB
RM.ON/OFF
BIAS
NORM/HIGH
A/B
A-TRG
B-TRG
TRG.H/L
CAPM.ON/OFF
CAPM.H/L
RELAY
A-HALF
A-PLAY
A-SHUT
B-HALF
B-SHUT
B-PLAY
+5V
ST-L
A.GND
ST-R
+10V
+7.5V
-7.5V
MUTE
LATCH
TUNED
STEREO
D.OUT
CLK
D.IN
IC1051
IC1051 TMP87CP64F MASTER CONTROL
X1501 8MHz
X1502 32.768KHz
4Vp-p (8MHz)
4.5Vp-p (32.768kHz)
Q1103 BN1F4M INVERTER
Q1501 2SC2785 RESET
IC1355
7V REG
IC1355 M5F7808L
(Page 71) C BD BOARD CNU102
FOUCUS SW
SCOR
SQSO
SQCK
SENS
D.F LATCH
DATA
XLAT
CLK
XRST
5V
DOUT
D-GND
A+5V
ROUT
A-GND
LOUT
M-GND
+7V
CN1701 15P
IC1901 LB1641
IC1901
LOADING MOTOR DRIVE
CN1901 5P
LOADOUT
LOADIN
GND
INSW
OUTSW
CN151
S271 (LOAD OUT)
S272 (LOAD IN)
M903 (LOADING MOTOR)
LOADING BOARD
IC1001
PHONO AMP
IC1001 (1/2) M5218AP
IC1001 (2/2) M5218AP
N300K MODEL
N300 MODEL
J1001 1/2
PHONO IN
J1001 2/2
VIDEO IN
Q1001-1004 SWITCH
Q1001 BA1A4M
Q1002 BA1A4M
Q1003 BA1A4M
Q1004 BA1A4M
IC1002 MC14052BCP
IC1002
FUNCTION
IC1003 MC14053BCP
IC1003
VIDEO&MPX
CN1006 15P
DATA
CLK
LATCH
D.GND
K.CON-CONT.
+5V
K.PON-CONT.
-7.5V
RIN
+7.5V
LIN
GND
R.OUT
GND
L.OUT
KEY CON BOARD CN1401
B
MAIN BOARD (1/3) MAIN SECTION


11
12
13
14
15
16
17
18
19
20
21
22
N300K MODEL
(Page 61)
D
PANEL BOARD CN601
A
MIC BOARD CN1601
(Page 57)
VF
-25V
+6V
-7.5V
GND
+7.5V
RDY
SPA.SIG
SD.IN
RESET
SD.OUT
REQ.GM
SCK.IN
REQ.MG
CN1501 15P
+5V
MIC.IN
A.GND
CN1003 AMP6P
(Page 44)
DBFB BOARD CN2101
N0704
L
GND
R
H
POWER AMP BOARD CN1203
N300 MODEL
IC1131
VOLUME
TC9210P
Q1102, 1152 MUTING
Q1102 2SC2785
Q1152 2SC2785
Q1801 2SC2785 SPE ANA AMP
IC1101
MIC+GEQ+DBFB
M62423FP
Q1101, 1151 2SC2785 DBFB SWITCH
Q1511 2SA1175 INVERTER
IC1502
INVERTER
TC74HCU04
L1501 10µH
IC1202
PROTECT
µPC1237HA
Q1204 BN1F4M SWITCH
Q1206 STANDBY SW
L STANDBY
H ACT
Q1205 BA1F4M
Q1205 RELAY
L ACT
H OFF
RY1201
(Page 45)
POWER AMP BOARD CN1204
I
DBFB BOARD CN2102
R-OUT
+B
L-OUT
D-ROAD
N0702 8P
L1201
L1251
R1226 390 2W
D1204 1N4148M
26.5V-37.5V
D1303 D3SBA20
C1303 3300 50V
C1304 3300 50V
Q1301, 1303 SW REG
Q1301 2SD809
Q1303 BA1F4M
16V
30MA
-25V
Q1321, 1322 REG
Q1321 2SB731KFE
Q1322 2SB1116
-32V
TA AC OFF
HP L
HP R
HP SW
E
(Page 61)
PANEL BOARD No.723
No.731 AMP-5P
CN1301 EH9P
N0701 SCN10P
[POW
11.5V-15V
C1333 6800 25V
C1334 3300 25V
IC1341
REG
IC1341 L78MR06
MICOM+6V
[REGULA
N0703
CN1302 6P
CD+5V
CD-A5V
CD-D5V
TC+5V
ST+5V
TA+5V
+5V
+7.5V
CD+UNREG
-7.5V
DECK-650MA
Q1361 2SB1116
Q1362 BA1F4M
N300K MODEL
KEY CON BOARD CN1401
(Page 58)
B
CN1371 3P
POWER SOURCE
N300:AEP2, UK MODEL

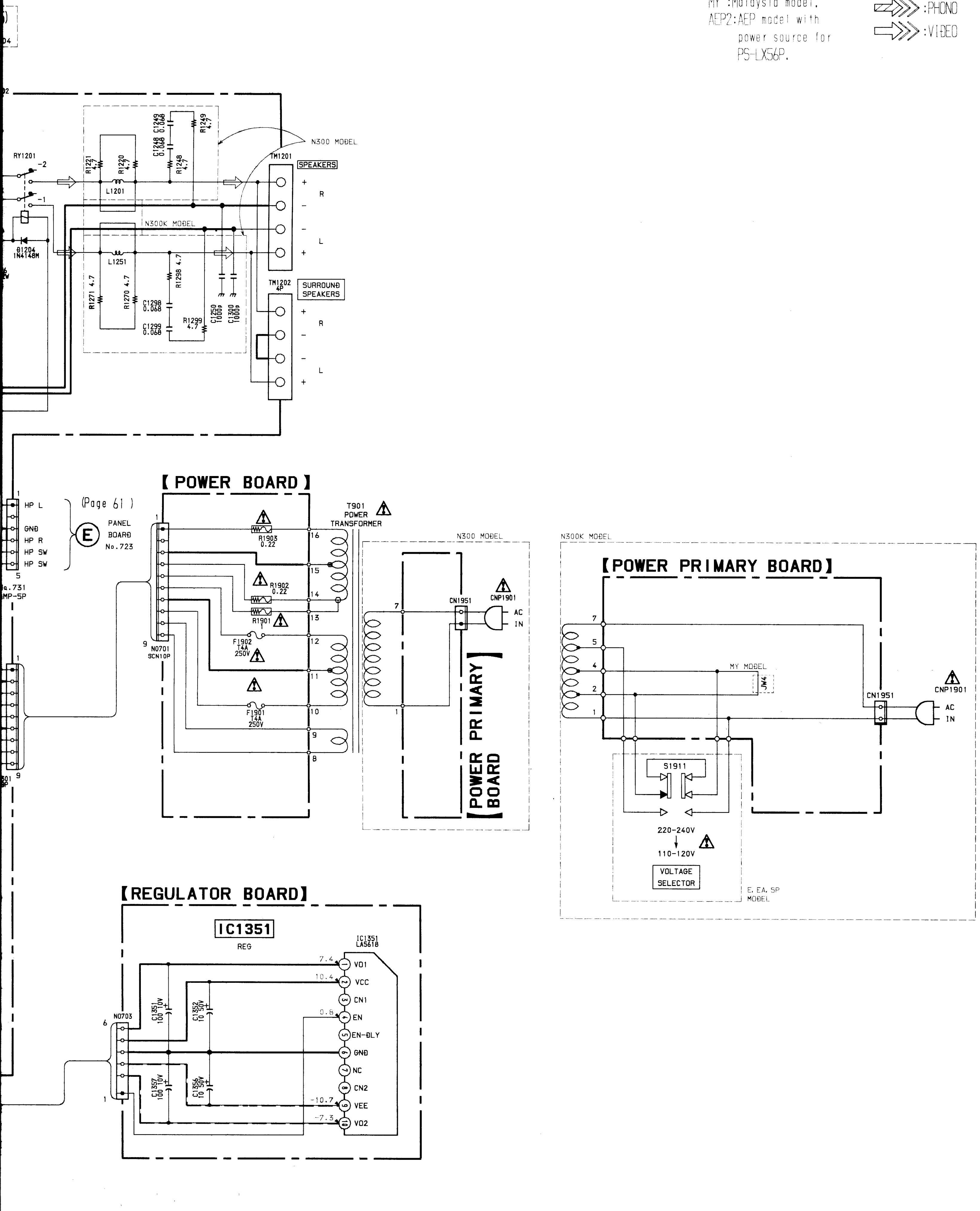
21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29

NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ :internal component.
- ⏛ :fusible resistor.
- ▭ :panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

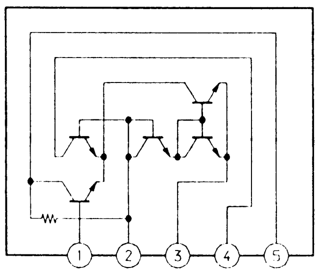
- ——— :B+ Line.
- – – – :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (deturned) conditions. no mark: FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  - G :German model.
  - IT :Italian model.
  - EE :East European model.
  - EA :Saudi Arabia model.
  - SP :Singapore model.
  - MY :Malaysia model.
  - AEP2: AEP model with power source for PS-LX56P.
- Signal path.
  - ⇨ :FM
  - ⋗ :PB (DECK)
  - ▷» :REC (DECK B)
  - ⇨ :CD
  - ⇨» :PHONO
  - ⇨» :VIDEO



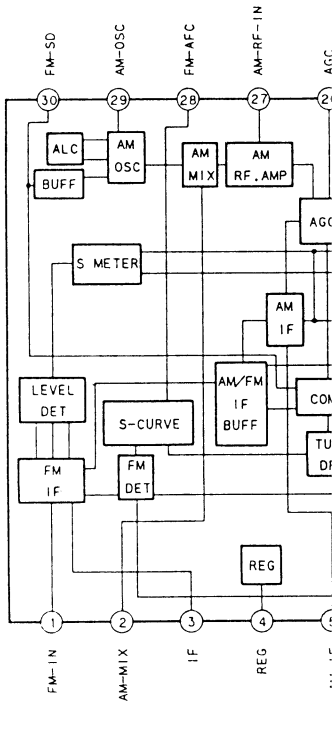
RY1201
-2
-1
D1204
1N4148M
R1221 4.7
R1220 4.7
L1201
C1248 0.068
C1249 0.068
R1248 4.7
R1249 4.7
N300 MODEL
N300K MODEL
L1251
R1271 4.7
R1270 4.7
R1298 4.7
C1298 0.068
C1299 0.068
R1299 4.7
C1250 1000p
C1300 1000p
TM1201
SPEAKERS
+
R
-
-
L
+
TM1202 4P
SURROUND SPEAKERS
HP L
GND
HP R
HP SW
HP SW
(Page 61)
E
PANEL BOARD No.723
【POWER BOARD】
T901 POWER TRANSFORMER
R1903 0.22
R1902 0.22
R1901 1
F1902 T4A 250V
F1901 T4A 250V
N0701 SCN10P
16
15
14
13
12
11
10
9
8
7
1
CN1951
CNP1901
AC IN
【POWER PRIMARY BOARD】
N300K MODEL
7
5
4
2
1
MY MODEL
JW4
S1911
220-240V
110-120V
VOLTAGE SELECTOR
E, EA, SP MODEL
【REGULATOR BOARD】
IC1351
REG
IC1351 LA5618
N0703
C1351 100 10V
C1352 10 50V
C1357 100 10V
C1356 10 50V
7.4
10.4
0.8
-10.7
-7.3
VO1
VCC
CN1
EN
EN-DLY
GND
NC
CN2
VEE
VO2

- **IC Block Diagrams.**

IC1, 2 TA7060AP

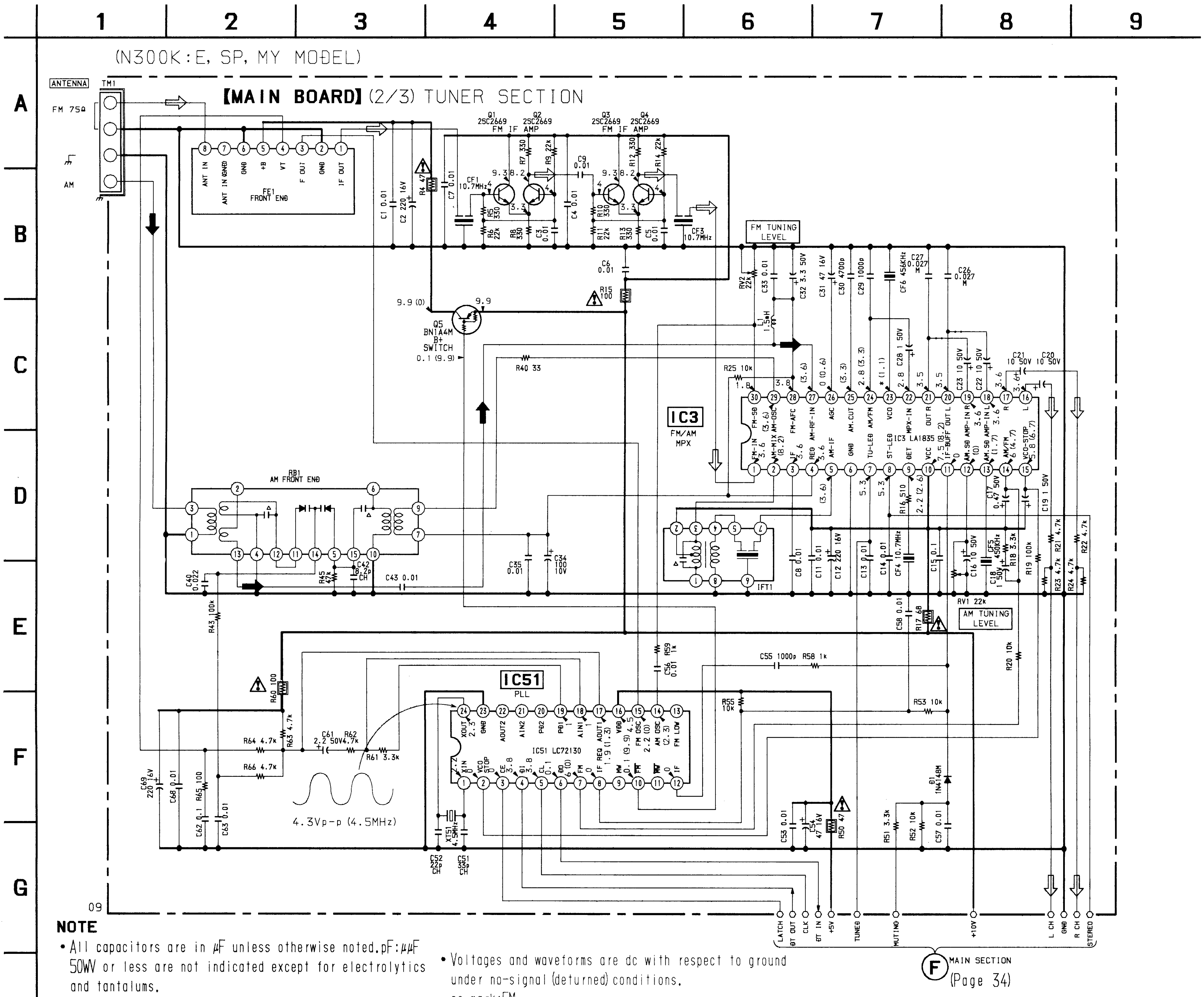


IC3 LA1835


FM-SD
AM-OSC
FM-AFC
AM-RF-IN
30
29
28
27
ALC
BUFF
AM OSC
AM MIX
AM RF.AMP
AGC
S METER
AM IF
LEVEL DET
S-CURVE
AM/FM IF BUFF
FM IF
FM DET
REG
1
2
3
4
FM-IN
AM-MIX
IF
REG

6-10. SCHEMATIC DIAGRAM — TUNER SECTION —

• See page 29 for Printed Wiring Board of MAIN BOARD.

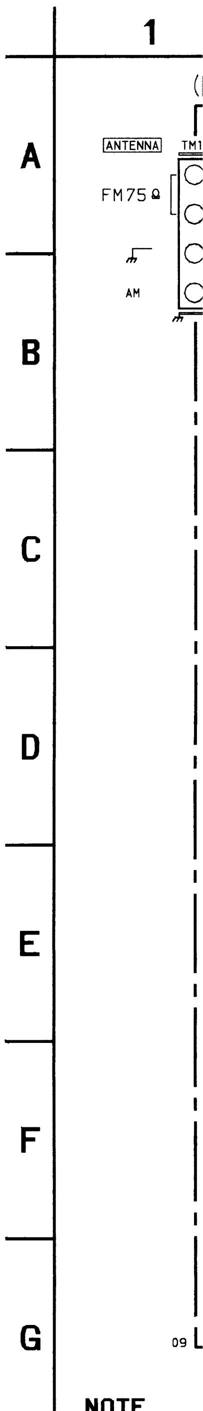

1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
(N300K: E, SP, MY MODEL)
[MAIN BOARD] (2/3) TUNER SECTION
ANTENNA
TM1
FM 75Ω
AM
FE1 FRONT END
ANT IN
ANT IN GND
GND
+B
VT
F OUT
GND
IF OUT
Q1 2SC2669
Q2 2SC2669
FM IF AMP
Q3 2SC2669
Q4 2SC2669
FM IF AMP
CF1 10.7MHz
CF3 10.7MHz
FM TUNING LEVEL
Q5 BN1A4M B+ SWITCH
9.9 (0)
9.9
0.1 (9.9)
R40 33
R25 10k
IC3
FM/AM MPX
IC3 LA1835
RB1 AM FRONT END
IFT1
RV1 22k
AM TUNING LEVEL
IC51
PLL
IC51 LC72130
4.3Vp-p (4.5MHz)
X51 4.5MHz
D1 1N4148M
LATCH
DT OUT
CLK
DT IN
+5V
TUNED
MUTING
+10V
L CH
GND
R CH
STEREO
09
MAIN SECTION
(Page 34)
F

NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ :internal component.
- ▭ :nonflammable resistor.
- ▭ :panel designation.
- —— :B+ Line.
- ▭ :adjustment for repair.
- Signal path.
  ⇨ :FM
  ➡ :AM
- Abbreviation
  MY :Malaysia model.
  SP :Singapore model.

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark:FM
  (　　) :AM
  * :can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

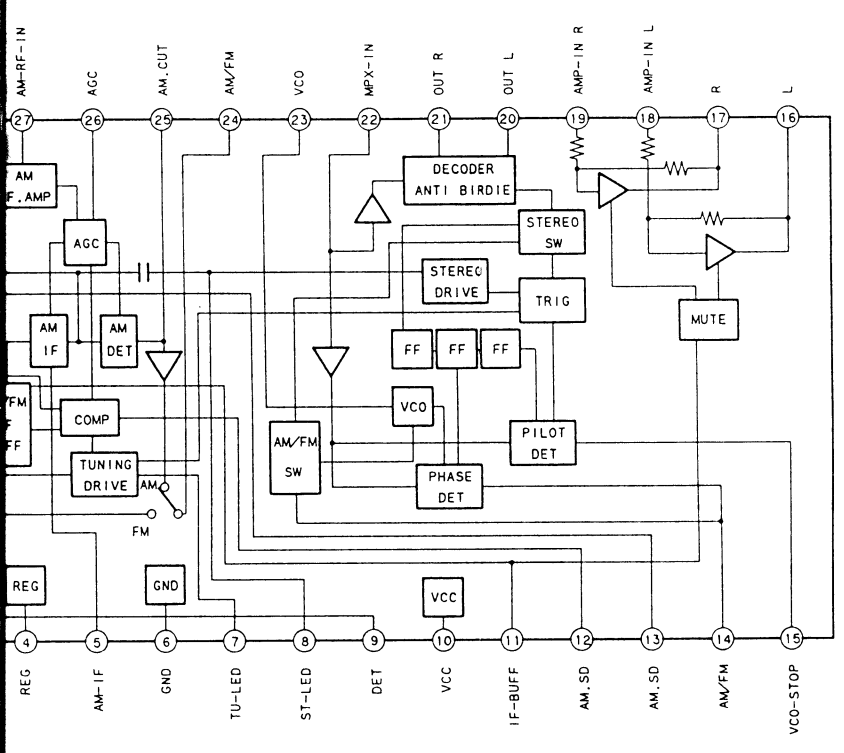
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.


1
A
B
C
D
E
F
G
ANTENNA
TM1
FM75Ω
AM
09

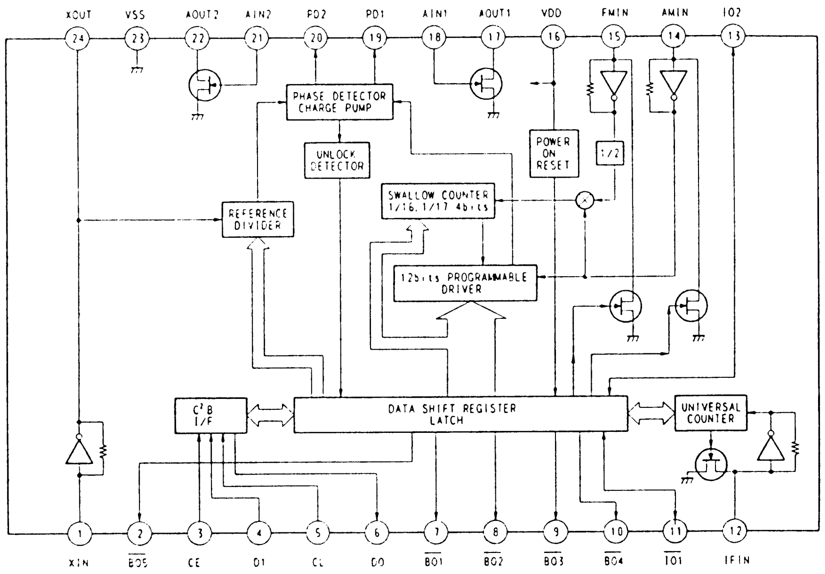
NOTE

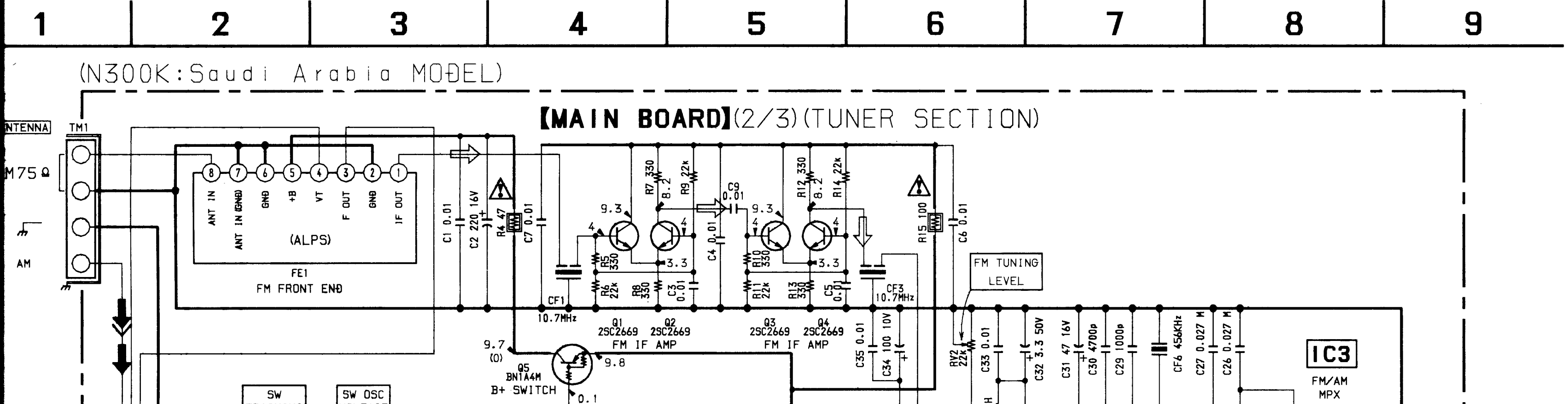
- All capaci
  50WV or le
  and tantal
- All resist
  specified.
- △
- ▭
- ▭

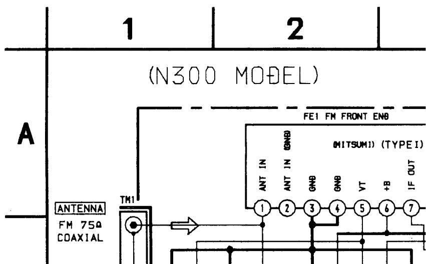
Note: The c
line
Repla


AM-RF-IN
AGC
AM.CUT
AM/FM
VCO
MPX-IN
OUT R
OUT L
AMP-IN R
AMP-IN L
R
L
AM
F.AMP
AGC
AM
IF
AM
DET
COMP
TUNING
DRIVE
FM
DECODER
ANTI BIRDIE
STEREO
SW
STEREO
DRIVE
TRIG
MUTE
FF
VCO
PILOT
DET
PHASE
DET
AM/FM
SW
REG
GND
VCC
REG
AM-IF
GND
TU-LED
ST-LED
DET
VCC
IF-BUFF
AM.SD
AM.SD
AM/FM
VCO-STOP

IC51 LC72130


XOUT
VSS
AOUT2
AIN2
PD2
PD1
AIN1
AOUT1
VDD
FMIN
AMIN
IO2
PHASE DETECTOR
CHARGE PUMP
UNLOCK
DETECTOR
POWER
ON
RESET
1/2
REFERENCE
DIVIDER
SWALLOW COUNTER
1/16, 1/17 4bits
12bits PROGRAMMABLE
DRIVER
C²B
I/F
DATA SHIFT REGISTER
LATCH
UNIVERSAL
COUNTER
XIN
BO5
CE
DI
CL
DO
BO1
BO2
BO3
BO4
IO1
IFIN


(N300K:Saudi Arabia MODEL)
[MAIN BOARD](2/3)(TUNER SECTION)
ANTENNA
FM 75Ω
AM
TM1
FE1
FM FRONT END
(ALPS)
Q1 2SC2669 Q2 2SC2669
FM IF AMP
Q3 2SC2669 Q4 2SC2669
FM IF AMP
CF1 10.7MHz
CF3 10.7MHz
FM TUNING LEVEL
Q5 BN1A4M
B+ SWITCH
SW TRACKING
SW OSC VOLTAGE
T1 ANT. SW3
T2 OSC SW3
Q6 2SA1175
Q7 2SA1175
Q9 BA1A4M
Q10 BA1A4M
Q8 BA1A4M
Q11 BA1A4M
RB1 MW FRONT END
Q6-11 BAND SWITCH
IC3
FM/AM MPX
IC3 LA1835
IFT1
AM TUNING LEVEL
IC51
PLL
IC51 LC72130
4.3Vp-p (4.5MHz)
LATCH
BT OUT
CLK
BT IN
+5V
TUNED
MUTING
+10V
L CH
GND
R CH
STEREO


(N300 MODEL)
ANTENNA
FM 75Ω
COAXIAL
AM
TM1
FE1 FM FRONT END
(MITSUMI) (TYPE I)
(ALPS) (TYPE II)
AEP, UK, EE, CIS MODEL
RB2 LW FRONT
G, IT MODEL
RB1 MW FRONT
AEP, UK, EE, CIS MODEL

TE

ll capacitors are in μF unless otherwise noted. pF: μμF
0WV or less are not indicated except for electrolytics
nd tantalums.

ll resistors are in Ω and 1/4W or less unless otherwise
pecified.

△ :internal component.

:nonflammable resistor.

:panel designation.

ote: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ——— :B+ Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark: FM
( ) : MW
< > : SW
* : can not be measured.

- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Signal path.

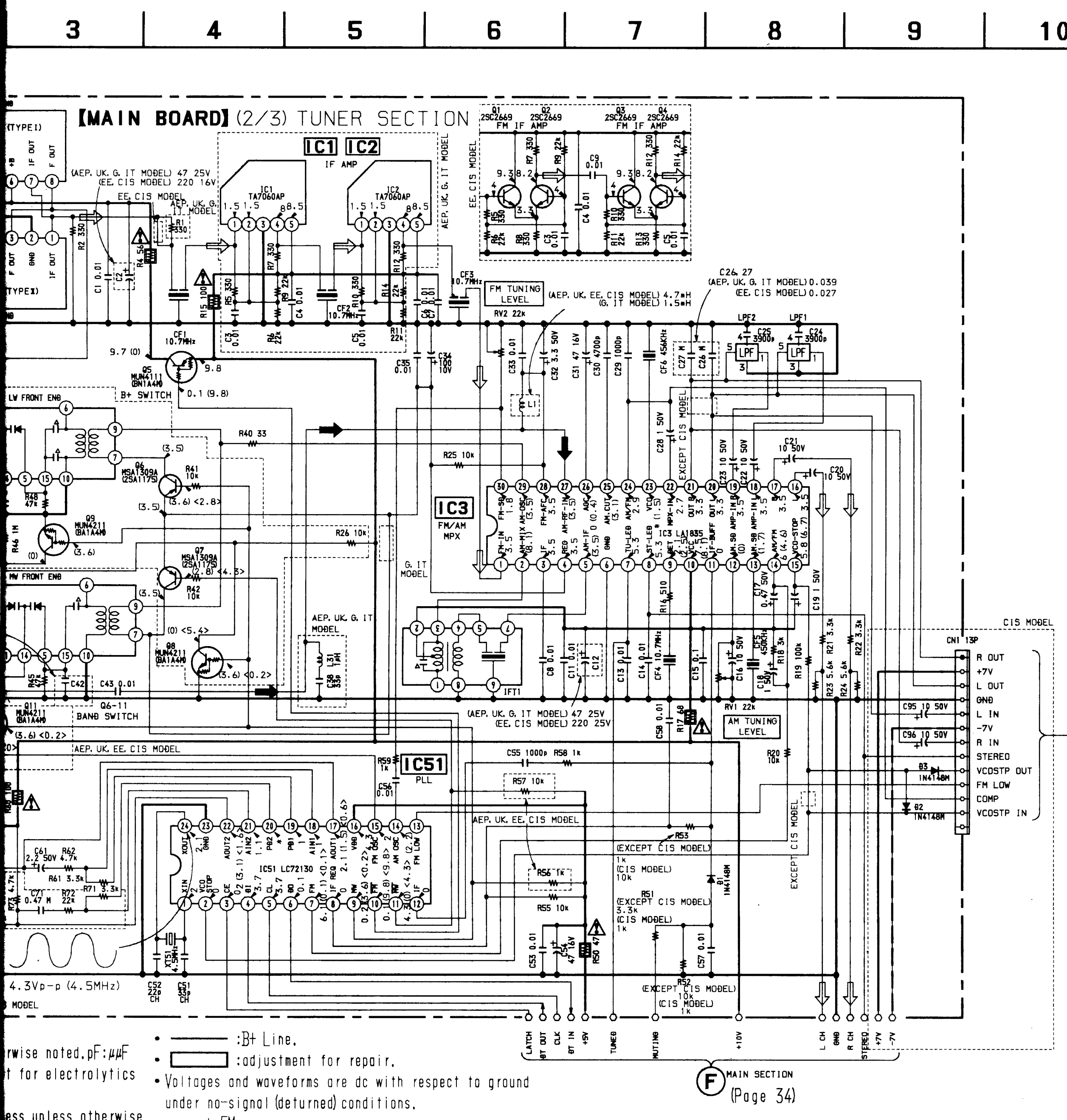
⇨ :FM
➡ :MW
➡➡ :SW

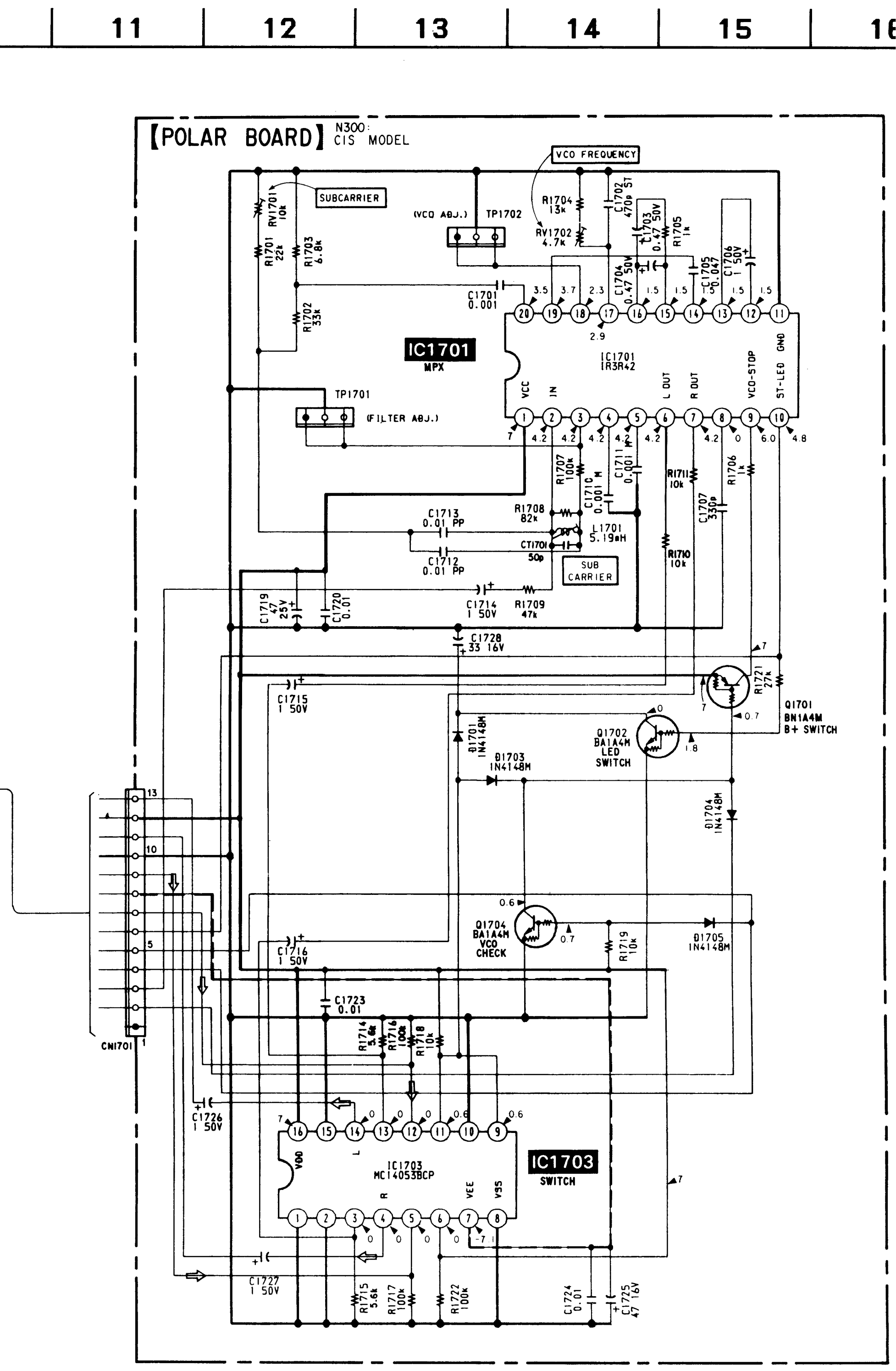
Ⓕ MAIN SECTION (Page 34)

NOTE

- All capacitors are in μF unless otherwise
50WV or less are not indicated except for
and tantalums.
- All resistors are in Ω and 1/4W or less u
specified.
- △ :internal component.
- :nonflammable resistor.
- :panel designation.

Note: The components identified by mark ⚠
line with mark ⚠ are critical for sa
Replace only with part number specifie


3
4
5
6
7
8
9
[MAIN BOARD] (2/3) TUNER SECTION
IC1 IC2
IF AMP
IC1 TA7060AP
IC2 TA7060AP
Q1 2SC2669 Q2 2SC2669 FM IF AMP
Q3 2SC2669 Q4 2SC2669 FM IF AMP
FM TUNING LEVEL
RV2 22k
IC3
FM/AM MPX
IC3 LA1835
IC51
PLL
IC51 LC72130
AM TUNING LEVEL
RV1 22k
CN1 13P
R OUT
+7V
L OUT
GND
L IN
-7V
R IN
STEREO
VCOSTP OUT
FM LOW
COMP
VCOSTP IN
CIS MODEL
4.3Vp-p (4.5MHz)
LATCH
BT OUT
CLK
BT IN
+5V
TUNED
MUTING
+10V
L CH
GND
R CH
STEREO
+7V
-7V
F MAIN SECTION (Page 34)


10
11
12
13
14
15
16
[POLAR BOARD] N300: CIS MODEL
VCO FREQUENCY
SUBCARRIER
(VCO ADJ.)
TP1702
TP1701
(FILTER ADJ.)
IC1701
MPX
IC1701 IR3R42
SUB CARRIER
Q1701 BN1A4M B+ SWITCH
Q1702 BA1A4M LED SWITCH
Q1704 BA1A4M VCO CHECK
CN1701
IC1703
SWITCH
IC1703 MC14053BCP

rwise noted. pF: μμF
t for electrolytics

ess unless otherwise

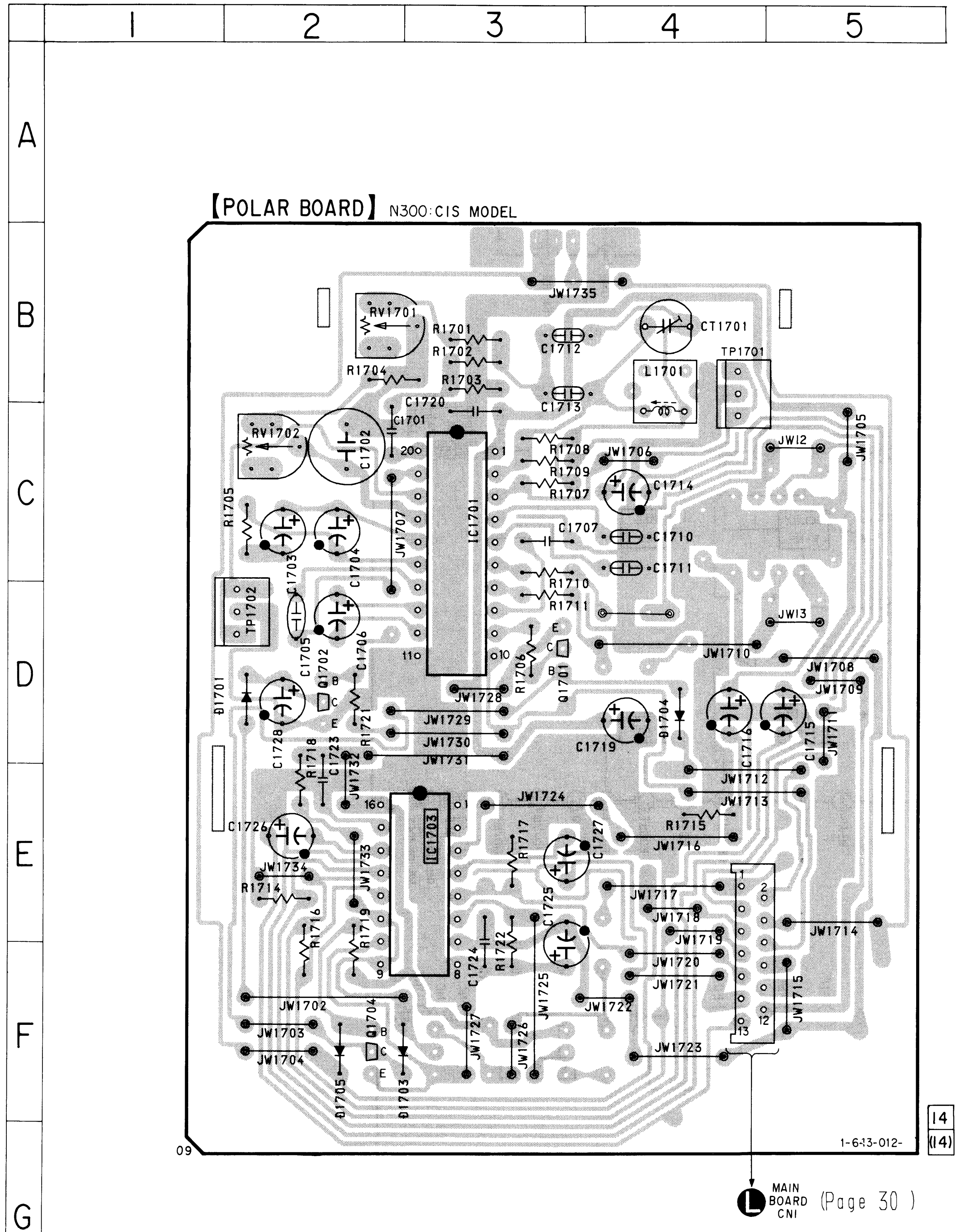
k ⚠ or dotted
or safety.
ecified.

- ——— : B+ Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark: FM
  (   ): MW
  <   >: LW
  * : can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Abbreviation
  EE : East European model.
  G : German model.
  IT : Italian model.
- Signal path.
  ⇨ : FM
  ➡ : MW
  ⇨» : LW

6-11. PRINTED WIRING BOARD — TUNER SECTION —

- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.


1
2
3
4
5
A
B
C
D
E
F
G
【POLAR BOARD】 N300:CIS MODEL
RV1701
RV1702
IC1701
IC1703
CT1701
TP1701
TP1702
L1701
Q1701
Q1702
Q1704
D1701
D1703
D1704
D1705
1-613-012-
09
14
(14)
MAIN BOARD CNI
(Page 30)

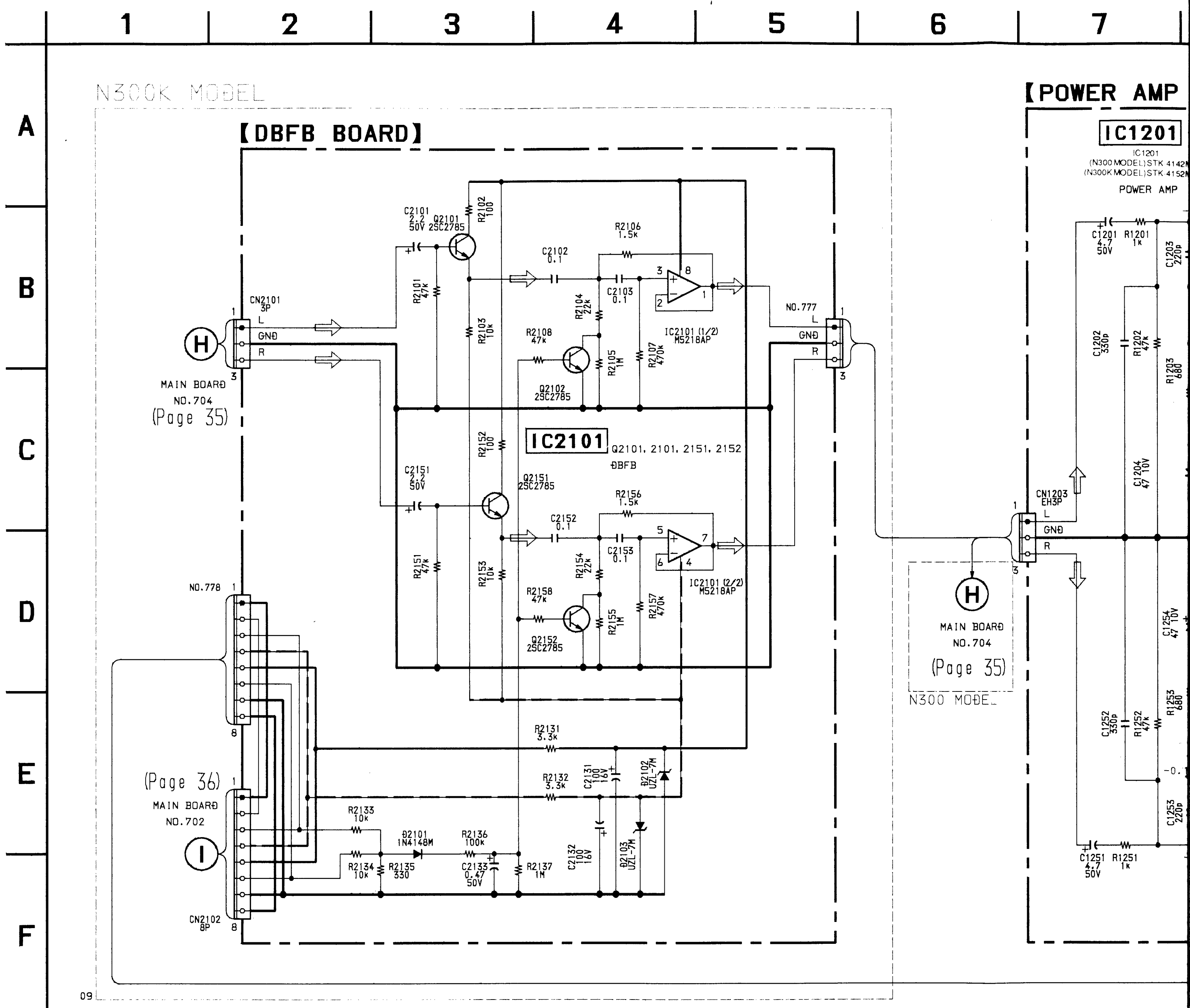
- **Semiconductor Location**

Ref. No.	Location
D1701	D-2
D1703	F-3
D1704	D-4
D1705	F-2
IC1701	C-3
IC1703	E-3
Q1701	D-3
Q1702	D-2
Q1704	F-2

Note:

- ▨ : Pattern from the side which enable seeing.

6-12. SCHEMATIC DIAGRAM — AMP SECTION —

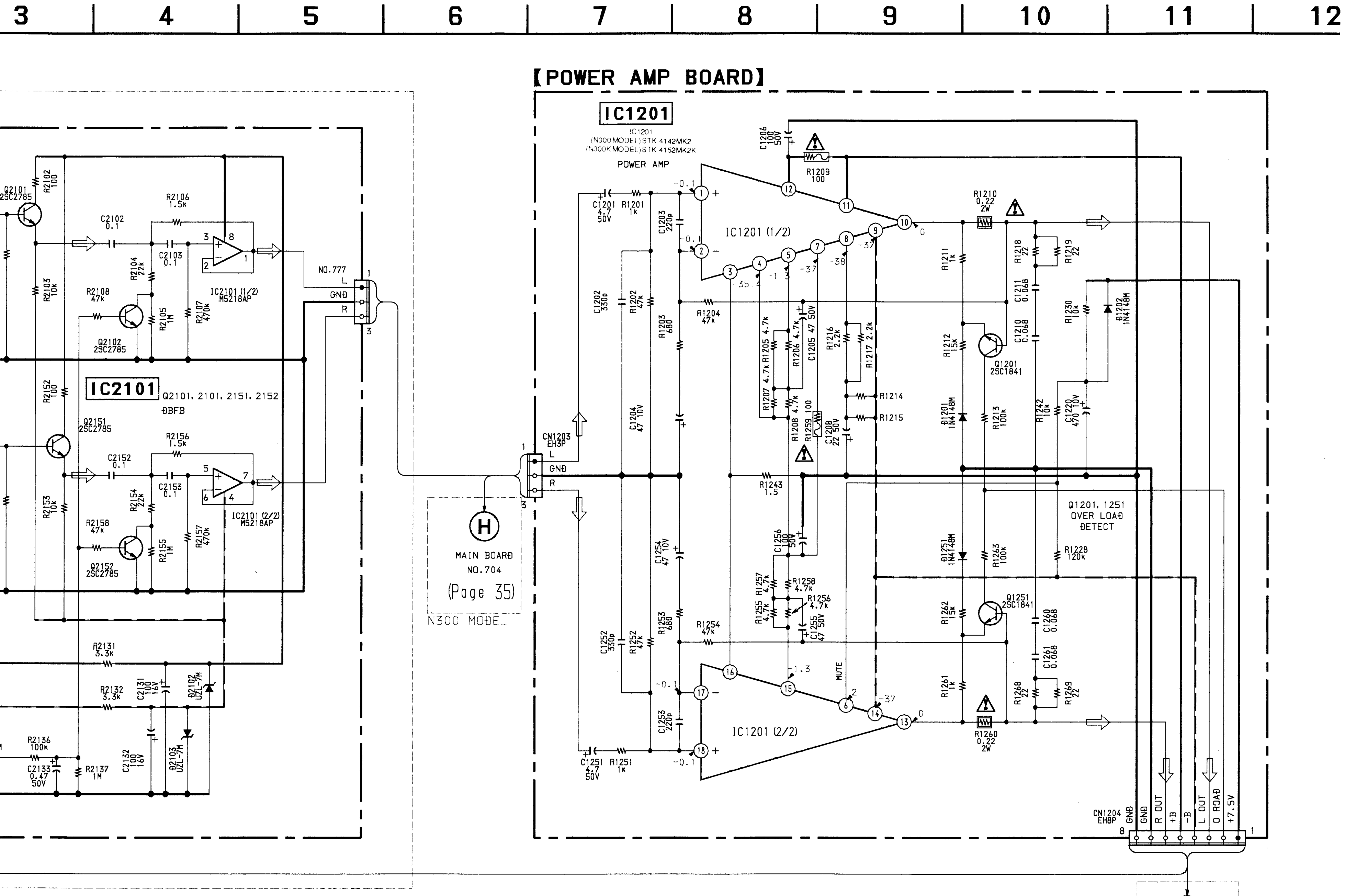

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
N300K MODEL
【DBFB BOARD】
IC2101
Q2101, 2101, 2151, 2152
DBFB
IC2101 (1/2) M5218AP
IC2101 (2/2) M5218AP
Q2101 2SC2785
Q2102 2SC2785
Q2151 2SC2785
Q2152 2SC2785
CN2101 3P
CN2102 8P
MAIN BOARD NO.704 (Page 35)
MAIN BOARD NO.702 (Page 36)
NO.777
NO.778
N300 MODEL
【POWER AMP
IC1201
IC1201 (N300 MODEL) STK-4142
(N300K MODEL) STK-4152
POWER AMP
CN1203 EH3P
09

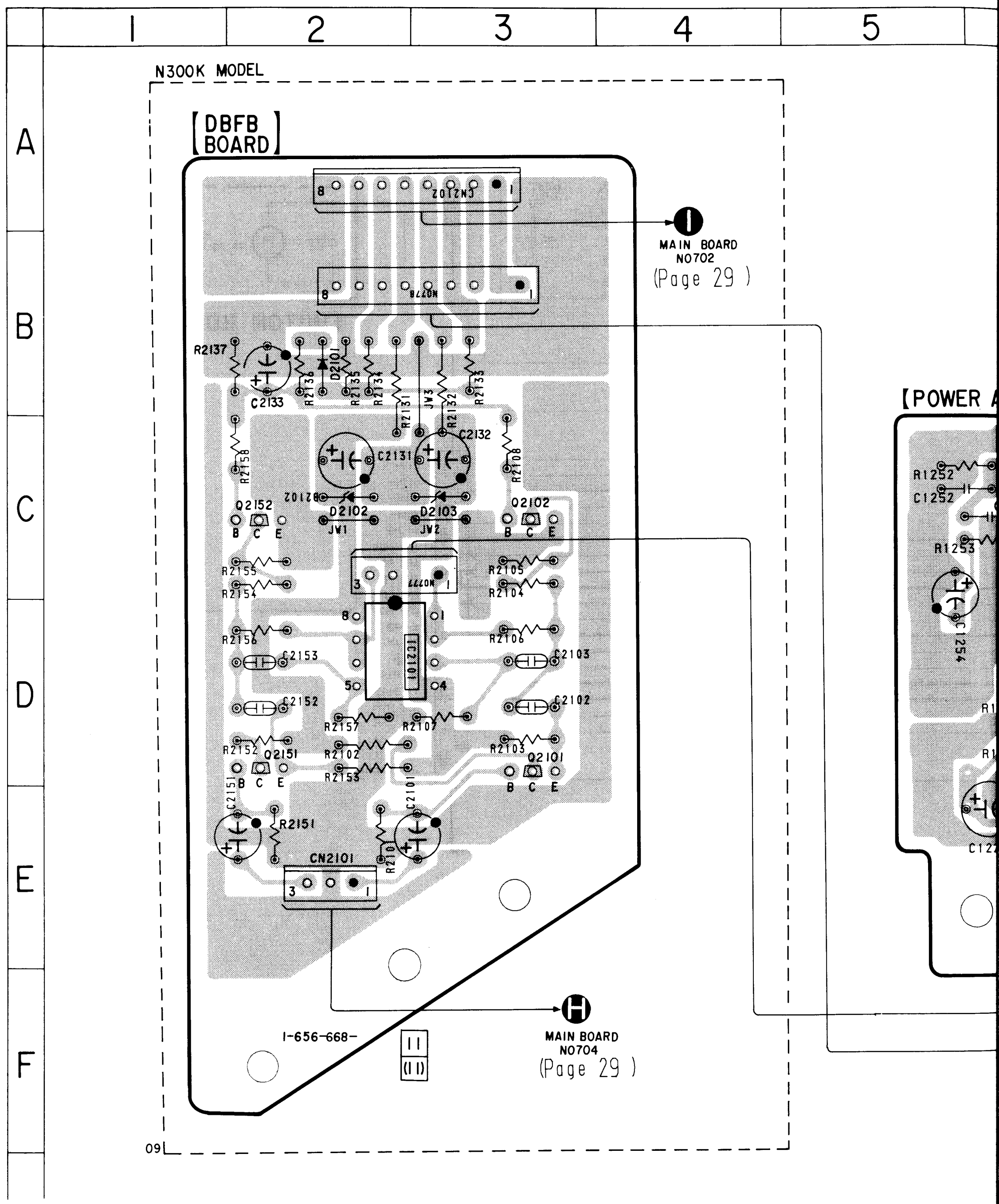
NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▭ :nonflammable resistor.
- ▭ :fusible resistor.
- ——— :B+ Line.
- — — — :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ :FM


3
4
5
6
7
8
9
10
11
12
【POWER AMP BOARD】
IC1201
IC1201
(N300 MODEL) STK 4142MK2
(N300K MODEL) STK 4152MK2K
POWER AMP
IC1201 (1/2)
IC1201 (2/2)
IC2101
Q2101, 2101, 2151, 2152
DBFB
IC2101 (1/2) M5218AP
IC2101 (2/2) M5218AP
Q2101 2SC2785
Q2102 2SC2785
Q2151 2SC2785
Q2152 2SC2785
Q1201 2SC1841
Q1251 2SC1841
Q1201, 1251 OVER LOAD DETECT
NO.777
CN1203 EH3P
CN1204 EH8P
GND
R OUT
+B
-B
L OUT
O ROAD
+7.5V
MUTE
MAIN BOARD NO.704 (Page 35)
N300 MODEL
MAIN BOARD NO.702 (Page 36)
N300 MODEL


1
2
3
4
5
A
B
C
D
E
F
N300K MODEL
【DBFB BOARD】
MAIN BOARD NO702 (Page 29)
MAIN BOARD NO704 (Page 29)
CN2101
IC2101
1-656-668-
【POWER A

se noted. pF: μμF
or electrolytics

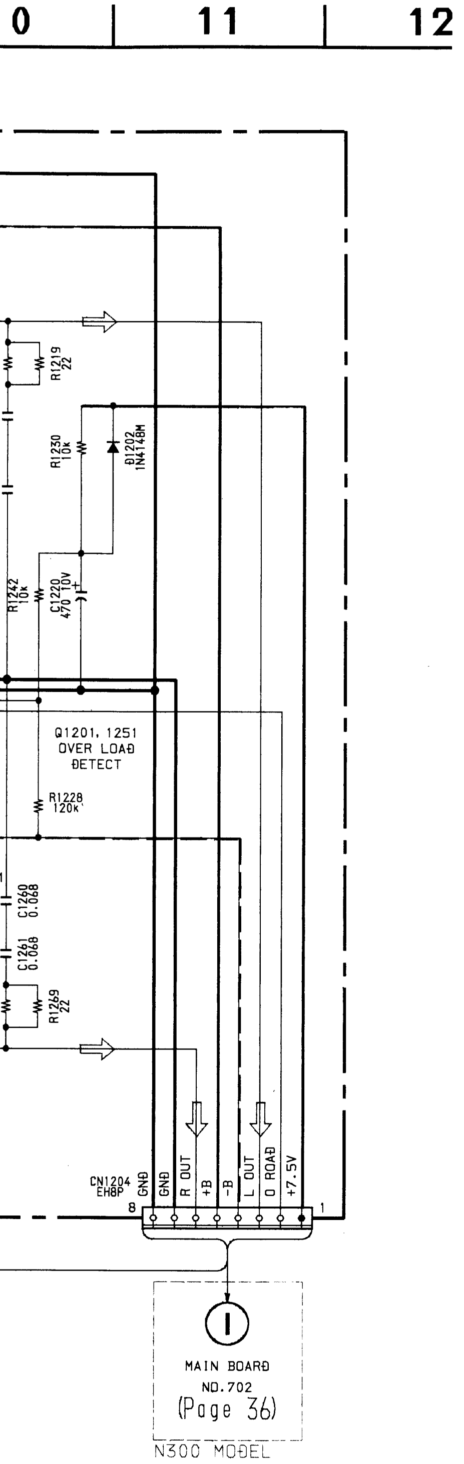
unless otherwise

△ or dotted
safety.
fied.

- ⊡ :nonflammable resistor.
- ⊡ :fusible resistor.
- ─── :B+ Line.
- — — — :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ :FM

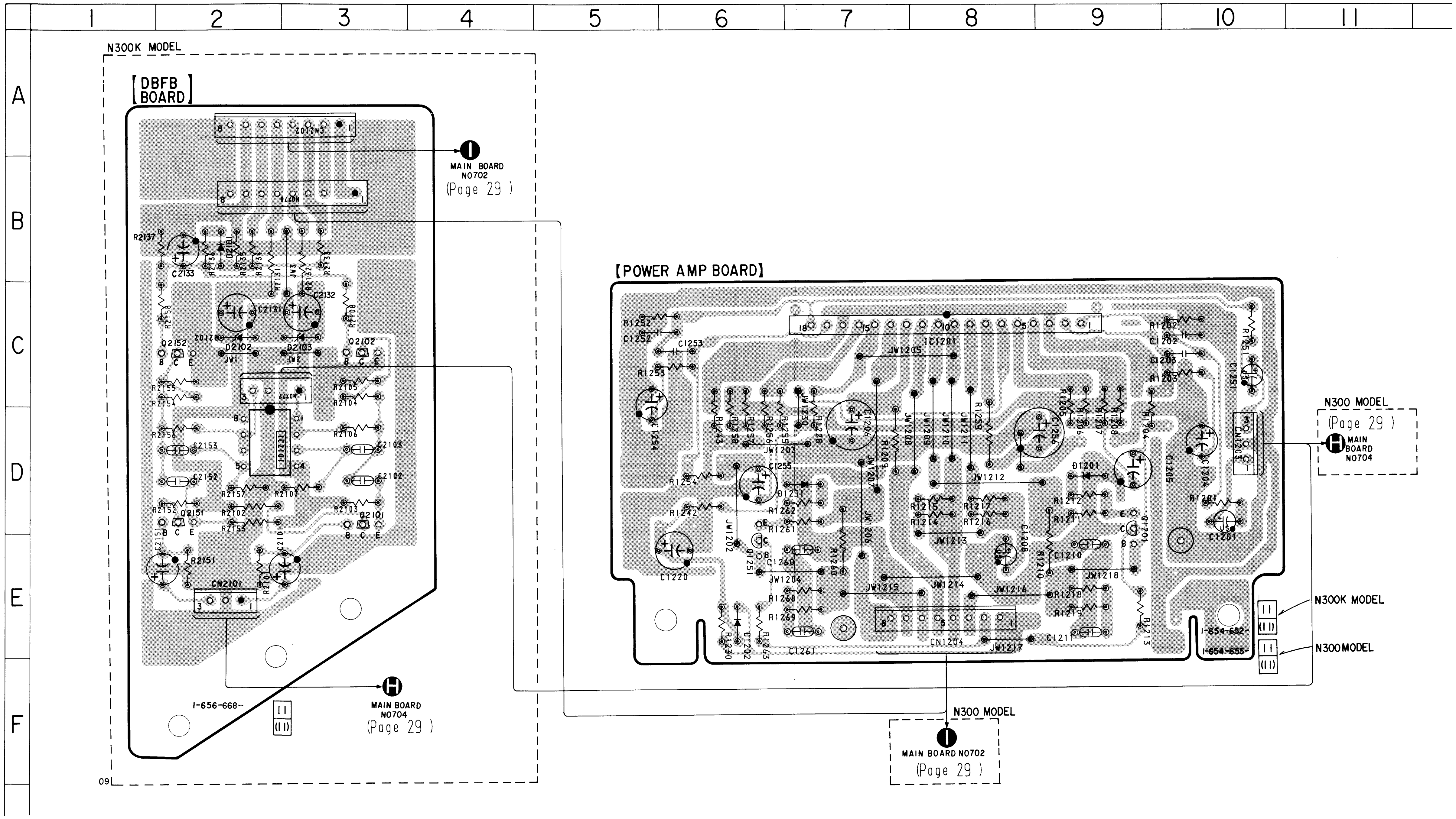
6-13. PRINTED WIRING BOARD — AMP SECTION —

- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.


0
11
12
R1219
22
R1230
10k
D1202
1N4148M
R1242
10k
C1220
470 10V
Q1201, 1251
OVER LOAD
DETECT
R1228
120k
C1260
0.068
C1261
0.068
R1269
22
CN1204
EH8P
GND
GND
R OUT
+B
-B
L OUT
O ROAD
+7.5V
8
1
MAIN BOARD
NO.702
(Page 36)
N300 MODEL

6-13. PRINTED WIRING BOARD — AMP SECTION —

- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.


1
2
3
4
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6
7
8
9
10
11
A
B
C
D
E
F
N300K MODEL
DBFB BOARD
CN2102
CN2103
MAIN BOARD
N0702
(Page 29)
IC2101
Q2101
Q2102
Q2151
Q2152
D2101
D2102
D2103
CN2101
1-656-668-
MAIN BOARD
N0704
(Page 29)
[POWER AMP BOARD]
IC1201
CN1203
CN1204
Q1201
Q1251
D1201
D1202
D1251
C1220
C1261
N300 MODEL
(Page 29)
MAIN BOARD
N0704
N300K MODEL
N300 MODEL
1-654-652-
1-654-655-
N300 MODEL
MAIN BOARD N0702
(Page 29)

• Semiconductor Location

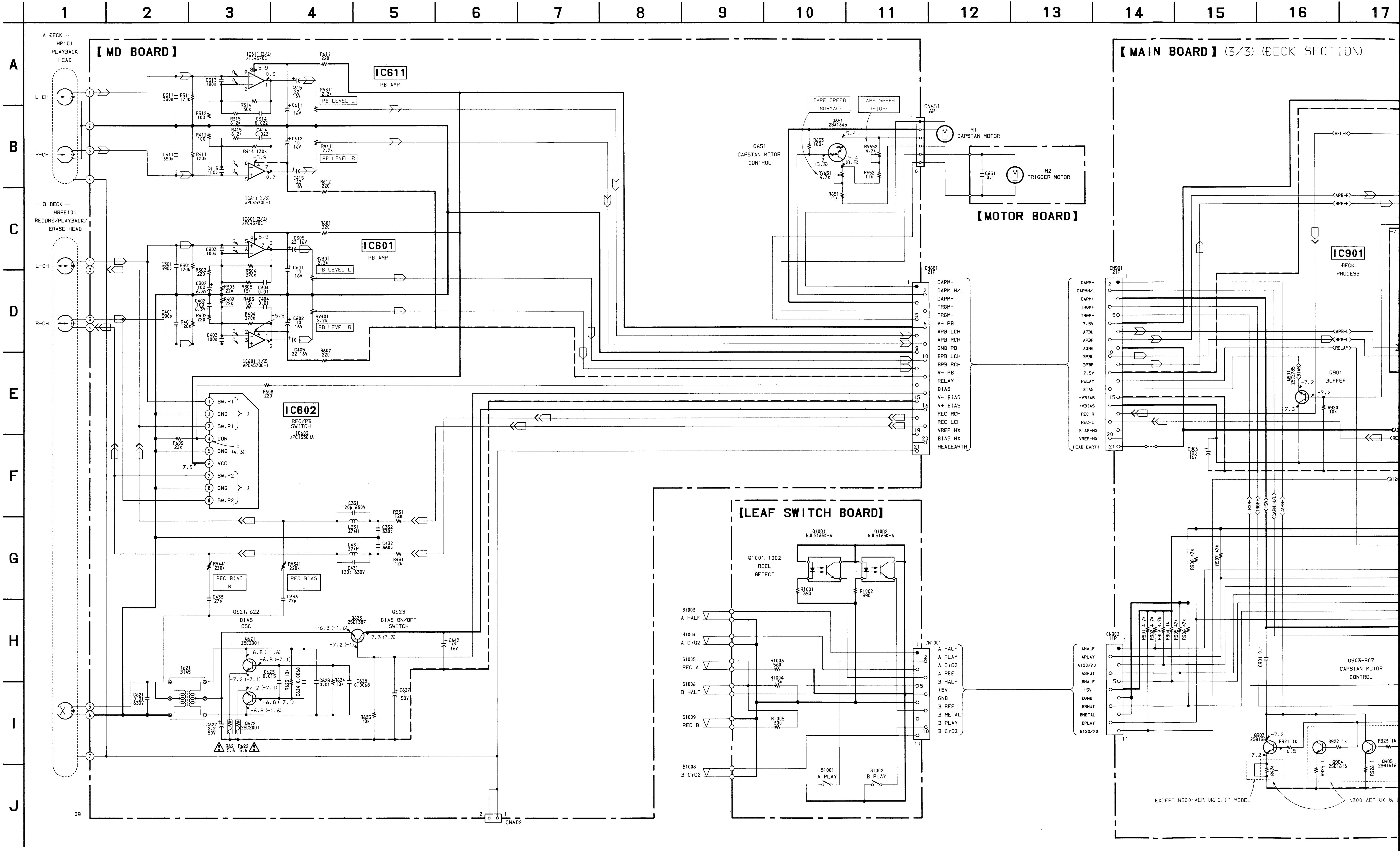
Ref. No.	Location	Ref. No.	Location
D1201	D-9	IC2101	D-2
D1202	E-6		
D1251	D-7	Q1201	D-9
D2101	B-2	Q1251	E-6
D2102	C-2	Q2101	D-3
D2103	C-3	Q2102	C-3
		Q2151	D-2
IC1201	C-8	Q2152	C-2

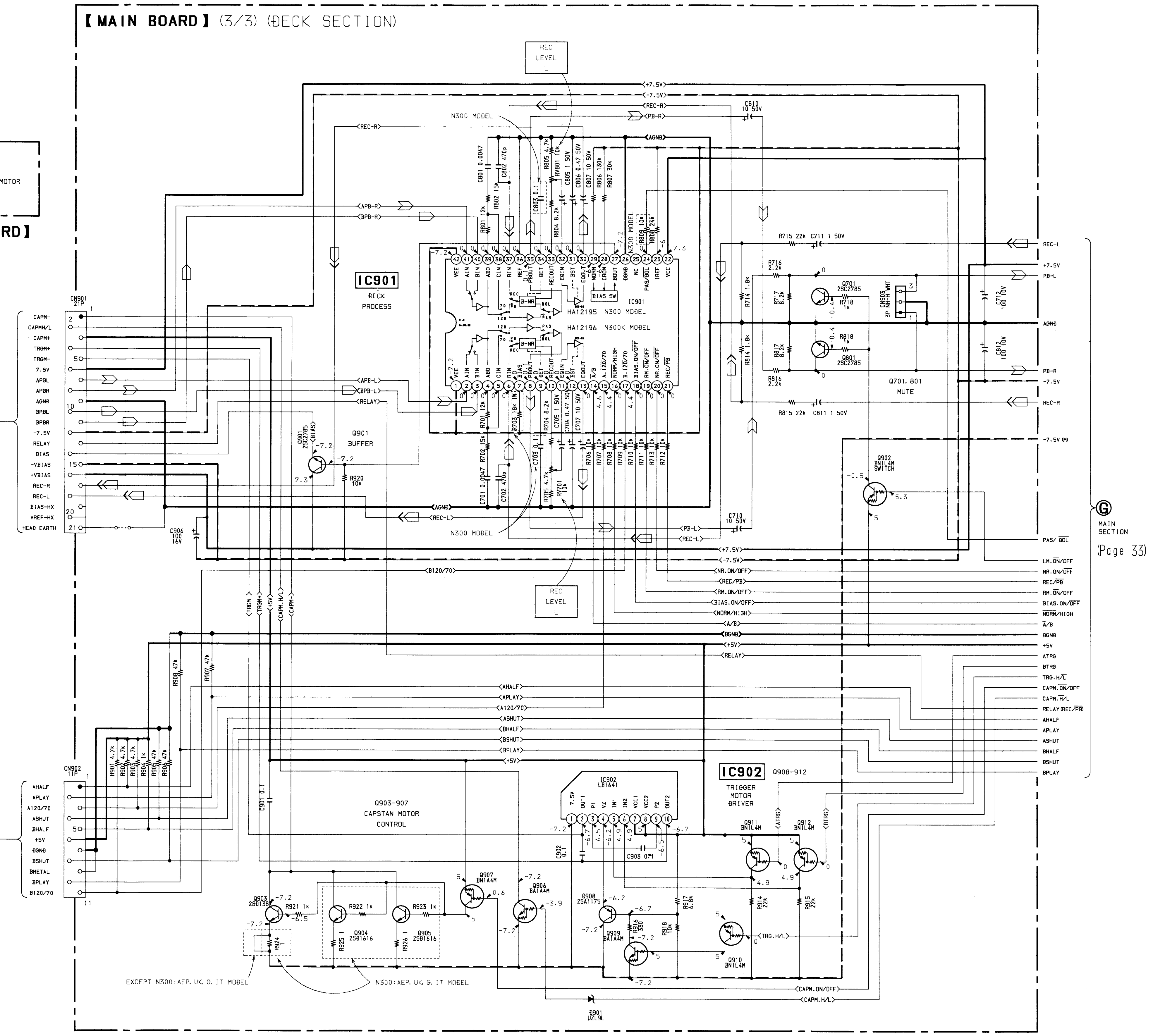
Note:

- ▨ : Pattern from the side which enable seeing.

6-14. SCHEMATIC DIAGRAM — DECK SECTION —

• See page 29 for Printed Wiring Board of MAIN BOARD.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C
D
E
F
G
H
I
J
— A DECK —
HP101
PLAYBACK
HEAD
L-CH
R-CH
— B DECK —
HRPE101
RECORD/PLAYBACK/
ERASE HEAD
【MD BOARD】
IC611
PB AMP
IC611 (2/2)
μPC4570C-1
IC611 (1/2)
μPC4570C-1
RV311
PB LEVEL L
RV411
PB LEVEL R
IC601
PB AMP
IC601 (2/2)
μPC4570C-1
IC601 (1/2)
μPC4570C-1
RV301
PB LEVEL L
RV401
PB LEVEL R
IC602
REC/PB
SWITCH
IC602
μPC1330HA
SW.R1
GND
SW.P1
CONT
GND
VCC
SW.P2
GND
SW.R2
RV441
220k
REC BIAS
R
RV341
220k
REC BIAS
L
Q621, 622
BIAS
OSC
Q623
BIAS ON/OFF
SWITCH
Q623
2SB1387
Q621
2SC2001
Q622
2SC2001
T621
BIAS
CN602
TAPE SPEED
(NORMAL)
TAPE SPEED
(HIGH)
Q651
2SA1345
Q651
CAPSTAN MOTOR
CONTROL
CN651
6P
M1
CAPSTAN MOTOR
M2
TRIGGER MOTOR
【MOTOR BOARD】
CN601
21P
CAPM-
CAPM H/L
CAPM+
TRGM+
TRGM-
V+ PB
APB LCH
APB RCH
GND PB
BPB LCH
BPB RCH
V- PB
RELAY
BIAS
V- BIAS
V+ BIAS
REC RCH
REC LCH
VREF HX
BIAS HX
HEADEARTH
【LEAF SWITCH BOARD】
Q1001
NJL5165K-A
Q1002
NJL5165K-A
Q1001, 1002
REEL
DETECT
S1003
A HALF
S1004
A CrO2
S1005
REC A
S1006
B HALF
S1009
REC B
S1008
B CrO2
S1001
A PLAY
S1002
B PLAY
CN1001
A HALF
A PLAY
A CrO2
A REEL
B HALF
+5V
GND
B REEL
B METAL
B PLAY
B CrO2
【MAIN BOARD】(3/3) (DECK SECTION)
CN901
21P
CN902
11P
IC901
DECK
PROCESS
Q901
2SC2785
BUFFER
Q903-907
CAPSTAN MOTOR
CONTROL
Q903
2SD1381
Q904
2SB1616
Q905
2SB1616
EXCEPT N300:AEP, UK, G, IT MODEL
N300:AEP, UK, G, I



【MAIN BOARD】(3/3) (DECK SECTION)
MOTOR
RD】
CN901 21P
CAPM-
CAPMH/L
CAPM+
TRGM+
TRGM-
7.5V
APBL
APBR
AGND
BPBL
BPBR
-7.5V
RELAY
BIAS
-VBIAS
+VBIAS
REC-R
REC-L
BIAS-HX
VREF-HX
HEAD-EARTH
CN902 11P
AHALF
APLAY
A120/70
ASHUT
BHALF
+5V
DGND
BSHUT
BMETAL
BPLAY
B120/70
REC LEVEL L
N300 MODEL
IC901 DECK PROCESS
IC901 HA12195 N300 MODEL
HA12196 N300K MODEL
BIAS-SW
Q901 BUFFER
R920 10k
C906 100 16V
Q701, 801 MUTE
Q701 2SC2785
Q801 2SC2785
Q902 BN1L4M SWITCH
CN903 3P NH-H WHT
IC902 Q908-912 TRIGGER MOTOR DRIVER
IC902 LB1641
Q903-907 CAPSTAN MOTOR CONTROL
Q903 2SB1368
Q904 2SD1616
Q905 2SD1616
Q906 BA1A4M
Q907 BN1A4M
Q908 2SA1175
Q909 BA1A4M
Q910 BN1L4M
Q911 BN1L4M
Q912 BN1L4M
D901 UZL9L
EXCEPT N300:AEP, UK, G, IT MODEL
N300:AEP, UK, G, IT MODEL
REC-L
+7.5V
PB-L
AGND
PB-R
-7.5V
REC-R
-7.5V (M)
PAS/ DOL
LM.ON/OFF
NR.ON/OFF
REC/PB
RM.ON/OFF
BIAS.ON/OFF
NORM/HIGH
A/B
DGND
+5V
ATRG
BTRG
TRG.H/L
CAPM.ON/OFF
CAPM.H/L
RELAY (REC/PB)
AHALF
APLAY
ASHUT
BHALF
BSHUT
BPLAY
Ⓖ MAIN SECTION
(Page 33)

NOTE

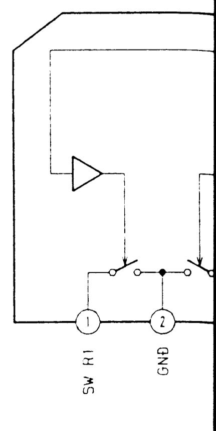
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % :indicates tolerance.
- :fusible resistor.

> Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
> Replace only with part number specified.

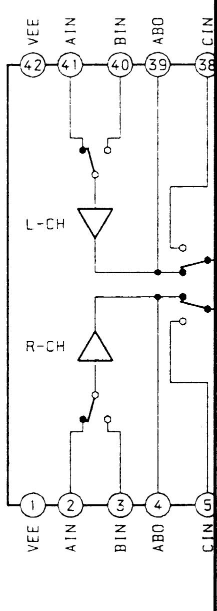
- ——— :B+ Line.
- – – – :B- Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PLAY
  ( ) : REC
  * : can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  G : German model.
  IT : Italian model.
- Signal path.
  ▷ :PB (DECK A)
  ▷ :PB (DECK B)
  ▷▷ :REC (DECK B)

- IC Block Diagra

IC602 μPC1330HA

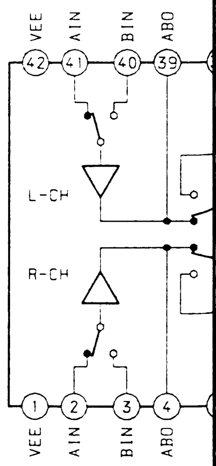


IC901 HA12195

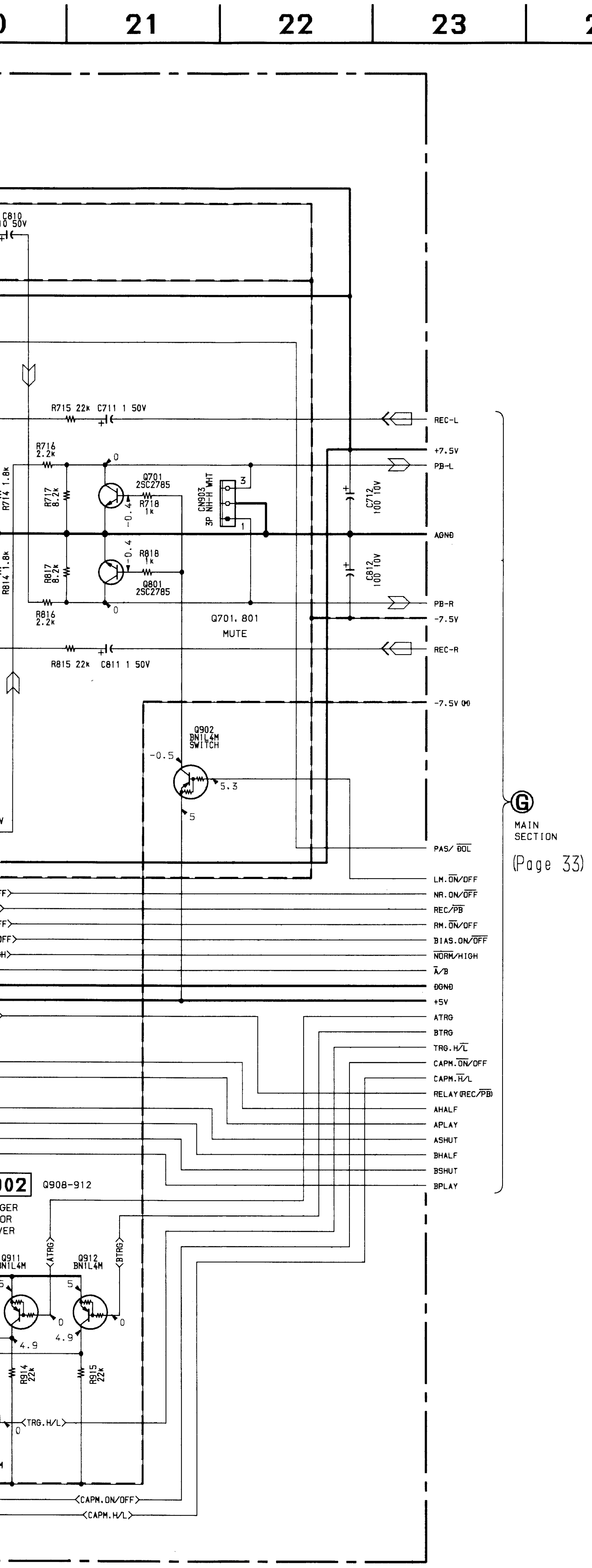


VEE
AIN
BIN
ABO
CIN
42
41
40
39
L-CH
R-CH
1
2
3
4
5
VEE
AIN
BIN
ABO
CIN

IC901 HA12196



VEE
AIN
BIN
ABO
42
41
40
39
L-CH
R-CH
1
2
3
4
VEE
AIN
BIN
ABO


21
22
23
24
25
26
27
C810
0 50V
R715 22k C711 1 50V
R716
2.2k
R714 1.8k
R717
8.2k
Q701
2SC2785
R718
1k
-0.4
0
CN903
3P NH-H WHT
3
1
C712
100 10V
R814 1.8k
R817
8.2k
R818
1k
Q801
2SC2785
R816
2.2k
C812
100 10V
Q701, 801
MUTE
R815 22k C811 1 50V
Q902
BN1L4M
SWITCH
-0.5
5.3
5
REC-L
+7.5V
PB-L
AGND
PB-R
-7.5V
REC-R
-7.5V (M)
PAS/ DOL
LM.ON/OFF
NR.ON/OFF
REC/PB
RM.ON/OFF
BIAS.ON/OFF
NORM/HIGH
A/B
DGND
+5V
ATRG
BTRG
TRG.H/L
CAPM.ON/OFF
CAPM.H/L
RELAY(REC/PB)
AHALF
APLAY
ASHUT
BHALF
BSHUT
BPLAY
G
MAIN
SECTION
(Page 33)
02
Q908-912
GER
OR
VER
Q911
BN1L4M
Q912
BN1L4M
ATRG
BTRG
5
0
4.9
R914
22k
R915
22k
TRG.H/L
CAPM.ON/OFF
CAPM.H/L

NOTE

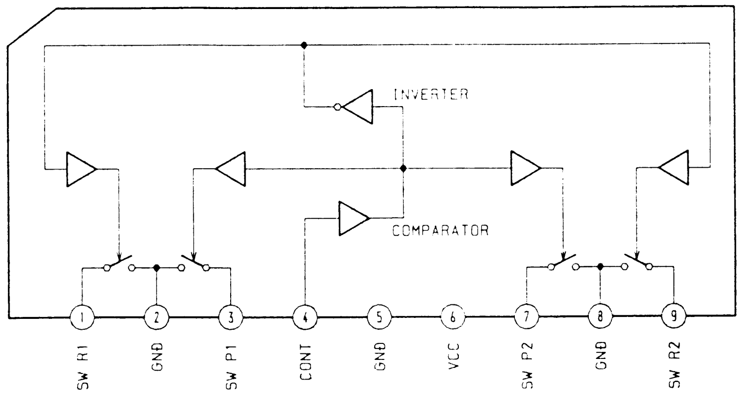
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % :indicates tolerance.
- —⊏WW∿⊐— :fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

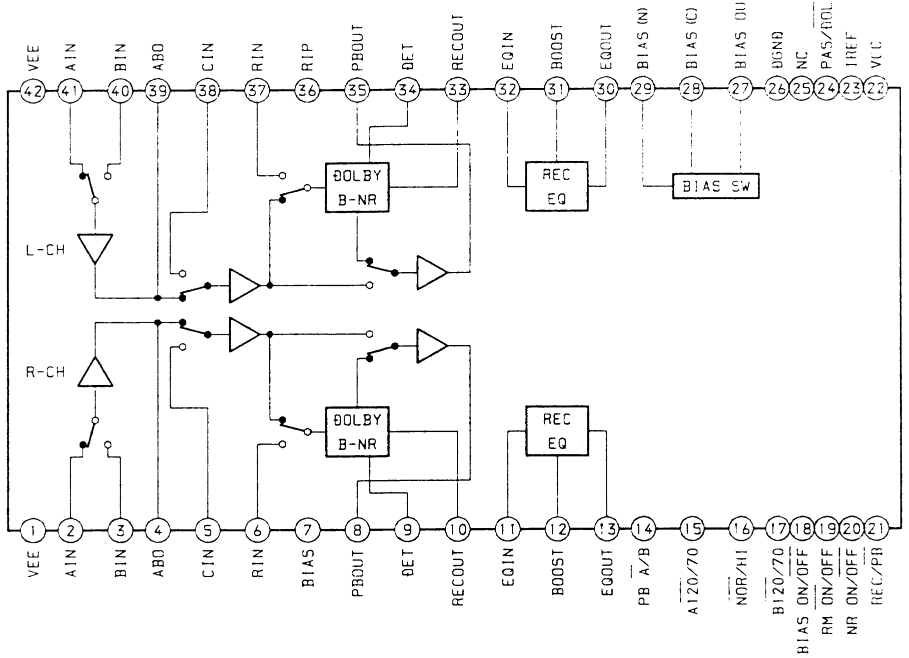
- ——— :B+ Line.
- – – – :B- Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: PLAY
  ( ) : REC
  * :can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  G :German model.
  IT :Italian model.
- Signal path.
  ⋝ :PB (DECK A)
  ▷ :PB (DECK B)
  ▷〉 :REC (DECK B)

• IC Block Diagrams.

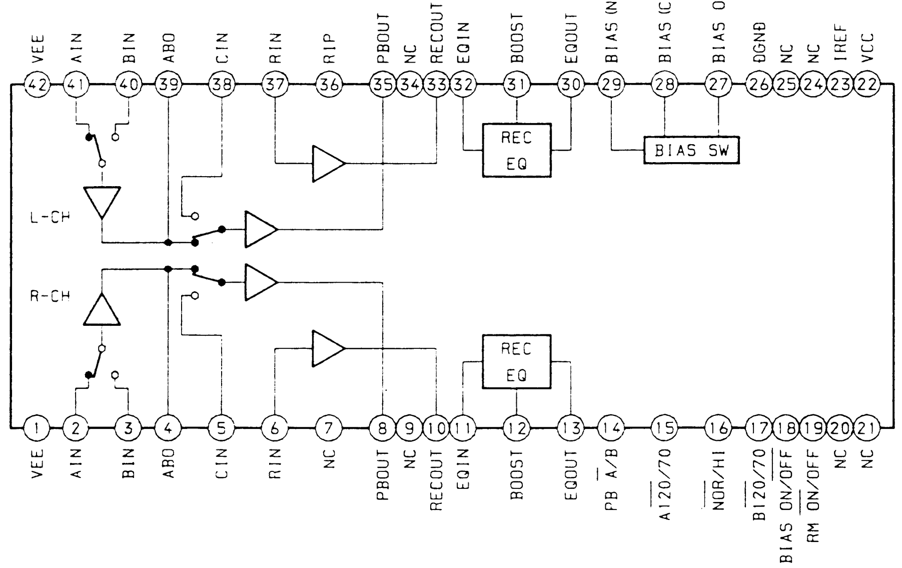
IC602 μPC1330HA


INVERTER
COMPARATOR
1
2
3
4
5
6
7
8
9
SW R1
GND
SW P1
CONT
GND
VCC
SW P2
GND
SW R2

IC901 HA12195

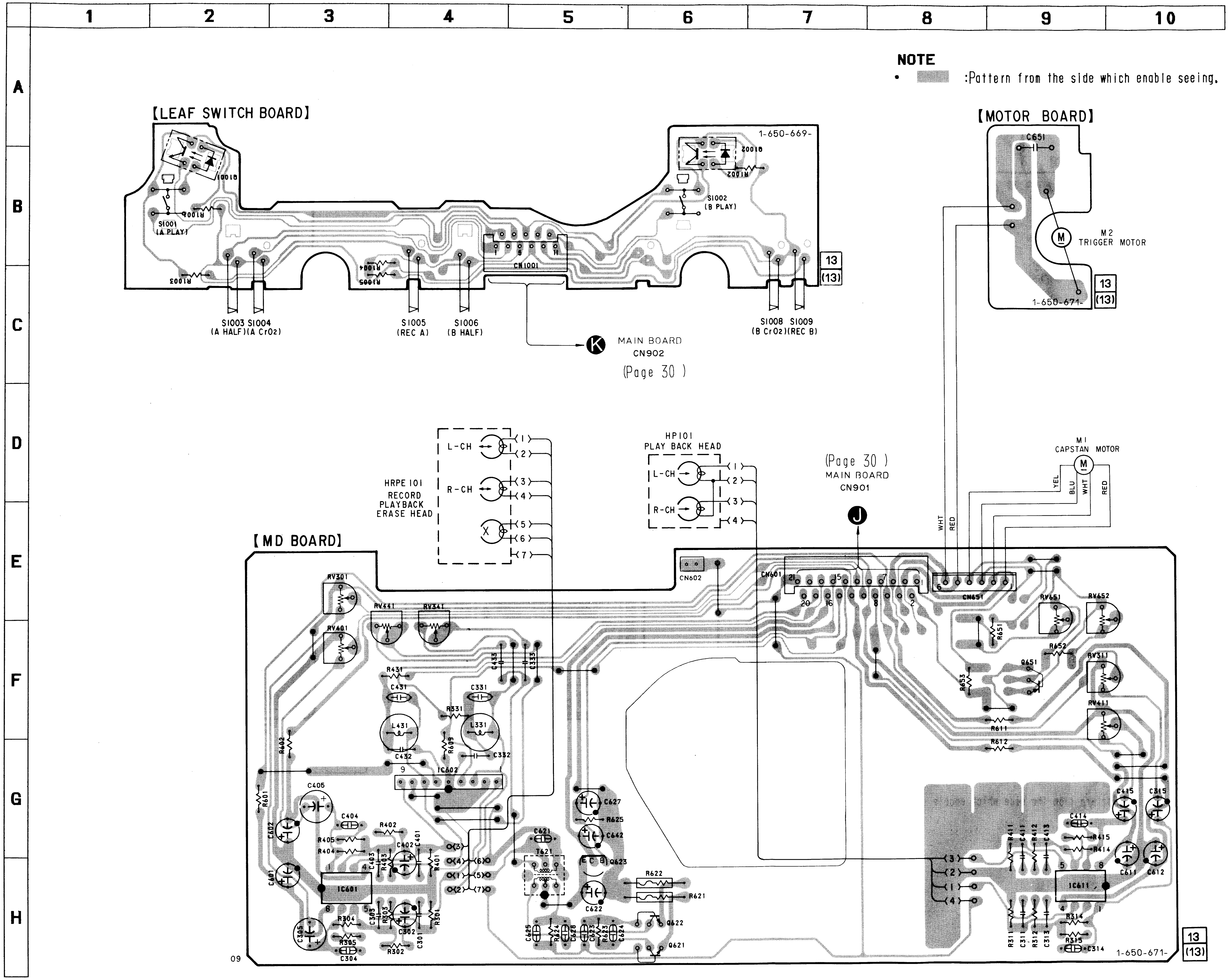

VEE
AIN
BIN
ABO
CIN
RIN
RIP
PBOUT
DET
RECOUT
EQIN
BOOST
EQOUT
BIAS (N)
BIAS (C)
BIAS OUT
DGND
NC
PAS/DOL
IREF
VCC
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
DOLBY
B-NR
REC
EQ
BIAS SW
L-CH
R-CH
DOLBY
B-NR
REC
EQ
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
VEE
AIN
BIN
ABO
CIN
RIN
BIAS
PBOUT
DET
RECOUT
EQIN
BOOST
EQOUT
PB A/B
A120/70
NOR/HI
B120/70
BIAS ON/OFF
RM ON/OFF
NR ON/OFF
REC/PB

IC901 HA12196


VEE
AIN
BIN
ABO
CIN
RIN
RIP
PBOUT
NC
RECOUT
EQIN
BOOST
EQOUT
BIAS (N)
BIAS (C)
BIAS OUT
DGND
NC
NC
IREF
VCC
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
REC
EQ
BIAS SW
L-CH
R-CH
REC
EQ
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
VEE
AIN
BIN
ABO
CIN
RIN
NC
PBOUT
NC
RECOUT
EQIN
BOOST
EQOUT
PB A/B
A120/70
NOR/HI
B120/70
BIAS ON/OFF
RM ON/OFF
NC
NC

6-15. PRINTED WIRING BOARD — DECK SECTION —

- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
【LEAF SWITCH BOARD】
1-650-669-
Q1001
Q1002
R1001
R1002
R1003
R1004
R1005
S1001 (A PLAY)
S1002 (B PLAY)
CN1001
S1003 S1004 (A HALF)(A CrO2)
S1005 (REC A)
S1006 (B HALF)
S1008 S1009 (B CrO2)(REC B)
K MAIN BOARD CN902 (Page 30)
13 (13)
【MOTOR BOARD】
C651
M2 TRIGGER MOTOR
1-650-671-
13 (13)
HRPE101 RECORD PLAYBACK ERASE HEAD
L-CH
R-CH
HP101 PLAY BACK HEAD
(Page 30) MAIN BOARD CN901
J
M1 CAPSTAN MOTOR
YEL
BLU
WHT
RED
WHT
RED
【MD BOARD】
CN602
CN601
CN651
RV301
RV441
RV341
RV401
RV651
RV652
RV311
RV411
R651
R652
R653
Q651
R611
R612
R431
C431
C433
C333
C331
R331
L431
L331
R609
C432
C332
R402
IC602
R601
C405
C402
C404
R402
R405
R404
C402
C401
R401
C403
R403
C401
IC601
R304
C303
R305
C302
R301
C301
C305
R305
C304
R302
C621
T621
C627
R625
C642
Q623
R622
R621
C622
C625
R624
C628
C623
C624
Q622
Q621
C415
C315
C414
R415
R414
R411
C411
R412
C413
C611
C612
IC611
R311
C311
R312
C313
R314
R315
C314
1-650-671-
13 (13)
09

NOTE

- ▨ :Pattern from the side which enable seeing.

- **Semiconductor Location**

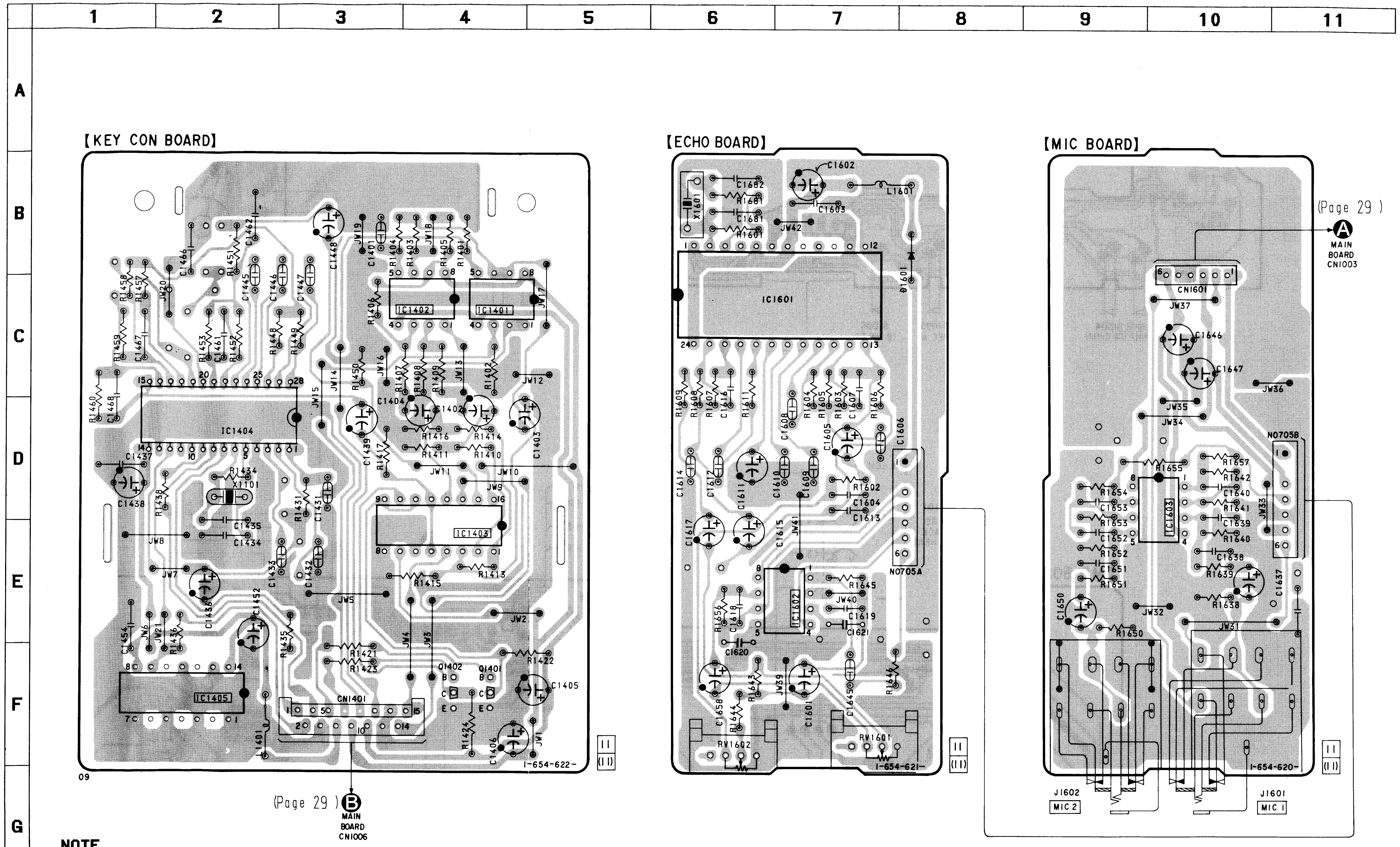
Ref. No.	Location
IC601	H-3
IC602	G-4
IC611	H-9
Q621	I-6
Q622	H-6
Q623	H-5
Q651	F-9
Q1001	B-2
Q1002	B-6

6-16. PRINTED WIRING BOARD — KARAOKE SECTION — (N300K MODEL ONLY)

• See page 27 for Circuit Boards Location.
• See page 28 for Semiconductor Lead Layouts.

- **Semiconductor Location**

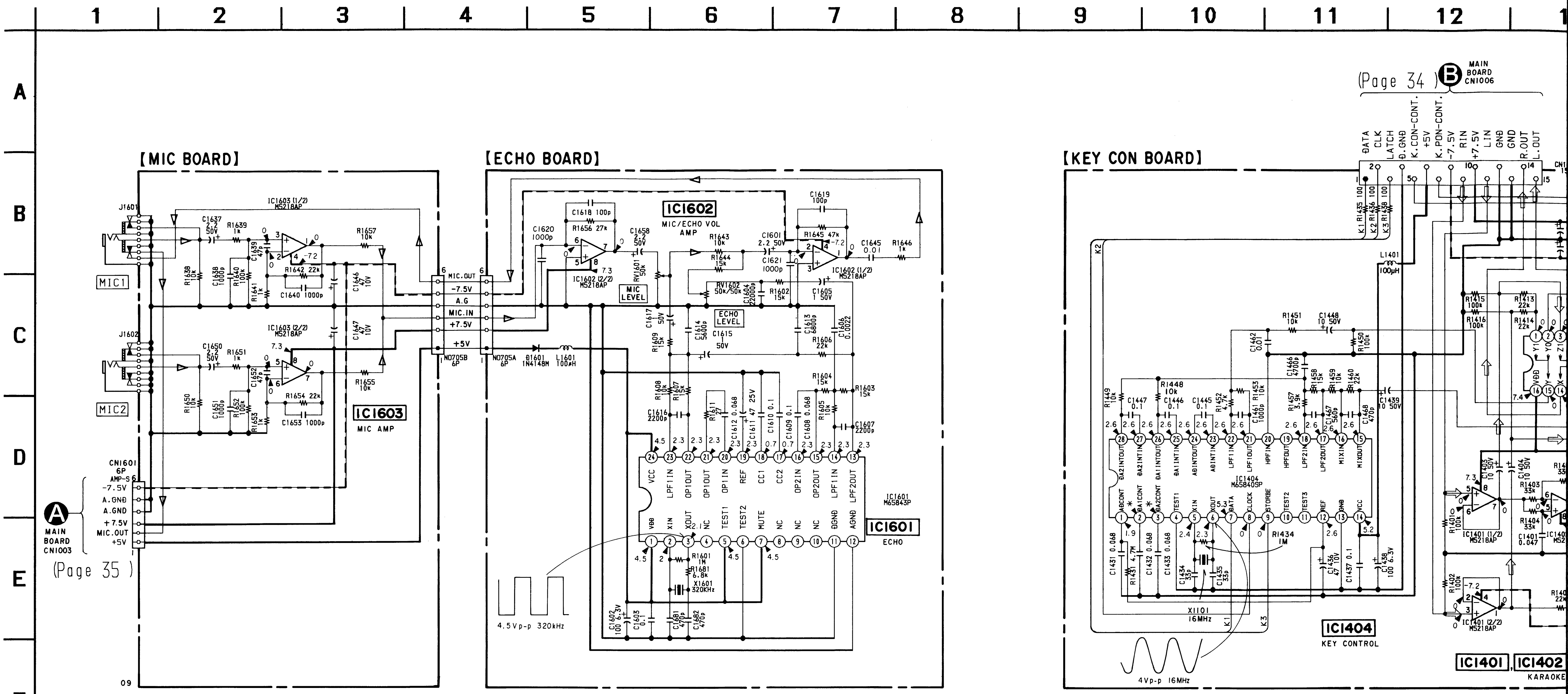
Ref. No.	Location
D1601	B-8
IC1401	C-4
IC1402	C-4
IC1403	E-4
IC1404	D-2
IC1601	C-7
IC1602	E-7
IC1603	D-10
Q1401	F-4
Q1402	F-4


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
【KEY CON BOARD】
【ECHO BOARD】
【MIC BOARD】
(Page 29)
A
MAIN BOARD CN1003
(Page 29)
B
MAIN BOARD CN1006
IC1401
IC1402
IC1403
IC1404
IC1405
IC1601
IC1602
IC1603
Q1401
Q1402
D1601
X1101
X1601
CN1401
CN1601
N0705A
N0705B
RV1601
RV1602
J1602
MIC 2
J1601
MIC 1
1-654-622-
1-654-621-
1-654-620-
09
11
(11)

NOTE

• ▨ :Pattern from the side which enable seeing.

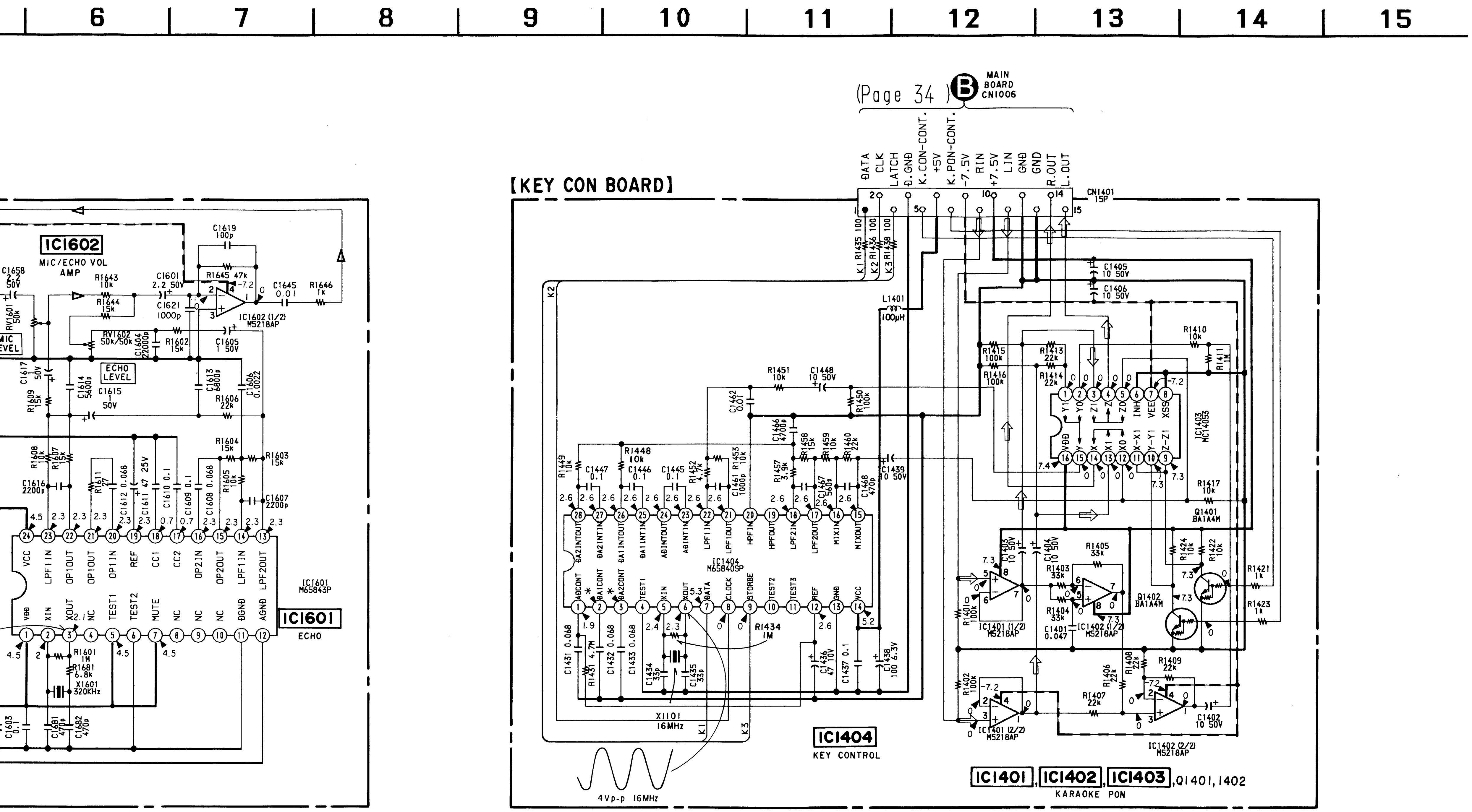
6-17. SCHEMATIC DIAGRAM — KARAOKE SECTION — (N300K MODEL ONLY)



[MIC BOARD]
[ECHO BOARD]
[KEY CON BOARD]
MIC1
MIC2
J1601
J1602
IC1603 (1/2) M5218AP
IC1603 (2/2) M5218AP
IC1603
MIC AMP
IC1602
MIC/ECHO VOL AMP
IC1602 (1/2) M5218AP
IC1602 (2/2) M5218AP
MIC LEVEL
ECHO LEVEL
IC1601 M65843P
IC1601
ECHO
X1601 320KHz
4.5Vp-p 320kHz
CN1601 6P AMP-S
-7.5V
A.GND
A.GND
+7.5V
MIC.OUT
+5V
MAIN BOARD CN1003
(Page 35)
N0705B 6P
N0705A 6P
D1601 1N4148M
L1601 100μH
MIC.OUT
-7.5V
A.G
MIC.IN
+7.5V
+5V
(Page 34)
MAIN BOARD CN1006
DATA
CLK
LATCH
D.GND
K.CON-CONT.
+5V
K.PON-CONT.
-7.5V
RIN
+7.5V
LIN
GND
GND
R.OUT
L.OUT
L1401 100μH
IC1404 M65840SP
IC1404
KEY CONTROL
X1101 16MHz
4Vp-p 16MHz
IC1401 (1/2) M5218AP
IC1401 (2/2) M5218AP
IC1401, IC1402
KARAOKE

NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ☐ :panel designation.
- ——— :B+ Line.
- – – – :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM
  * :can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ :FM
  ▷ :MIC


6
7
8
9
10
11
12
13
14
15
(Page 34)
B
MAIN BOARD CN1006
[KEY CON BOARD]
DATA
CLK
LATCH
D.GND
K.CON-CONT.
+5V
K.PON-CONT.
-7.5V
RIN
+7.5V
LIN
GND
GND
R.OUT
L.OUT
CN1401 15P
IC1602
MIC/ECHO VOL AMP
IC1602 (1/2) M5218AP
RV1601 50k
MIC LEVEL
RV1602 50k/50k
ECHO LEVEL
IC1601 M65843P
IC1601
ECHO
X1601 320KHz
IC1404 M65840SP
IC1404
KEY CONTROL
X1101 16MHz
4Vp-p 16MHz
L1401 100µH
IC1403 MC14053
IC1401 (1/2) M5218AP
IC1401 (2/2) M5218AP
IC1402 (1/2) M5218AP
IC1402 (2/2) M5218AP
Q1401 BA1A4M
Q1402 BA1A4M
IC1401, IC1402, IC1403, Q1401, 1402
KARAOKE PON

:B+ Line.

:B- Line.

nd waveforms are dc with respect to ground

ignal conditions.

n not be measured.

- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.

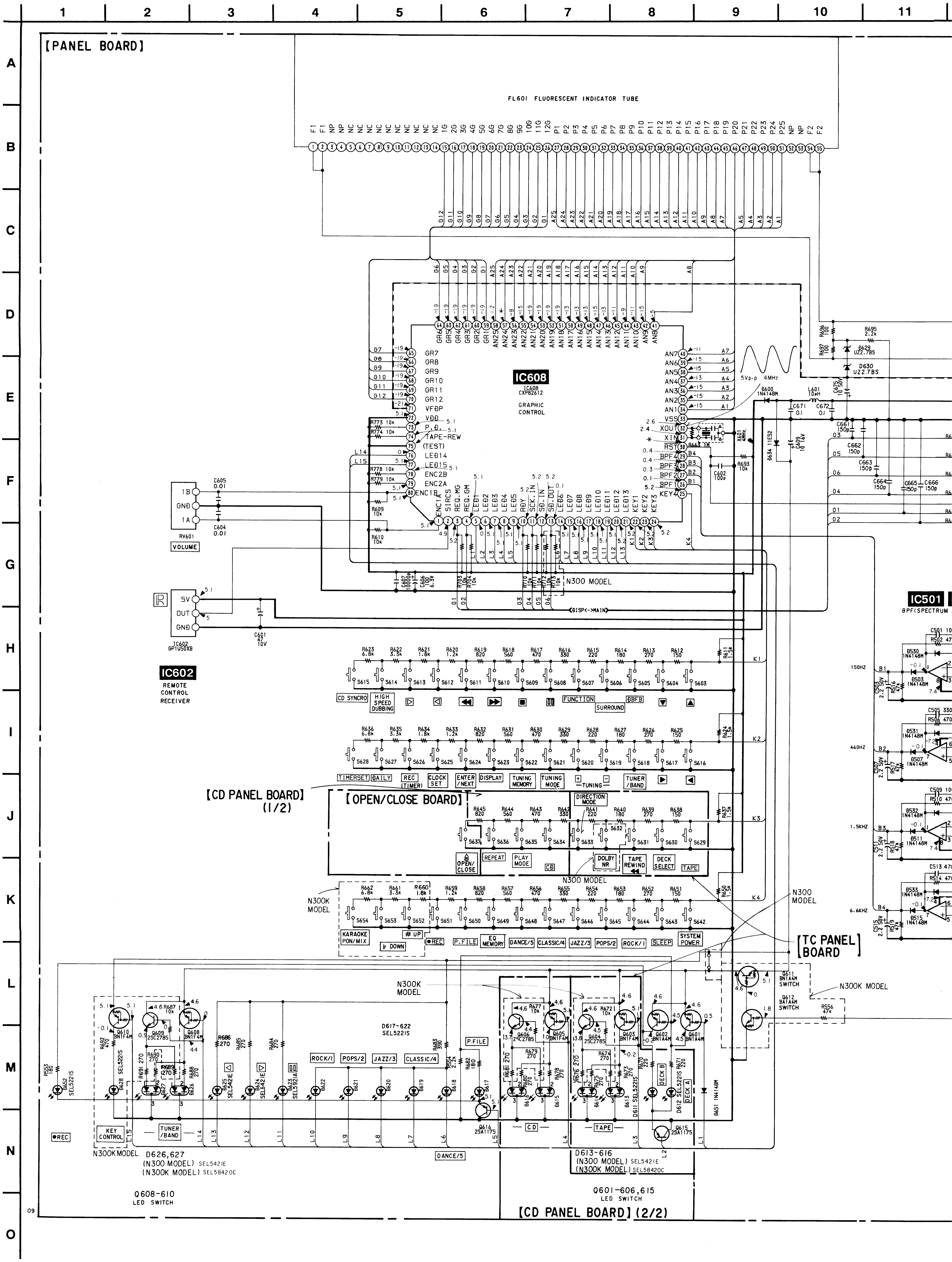
- Signal path.

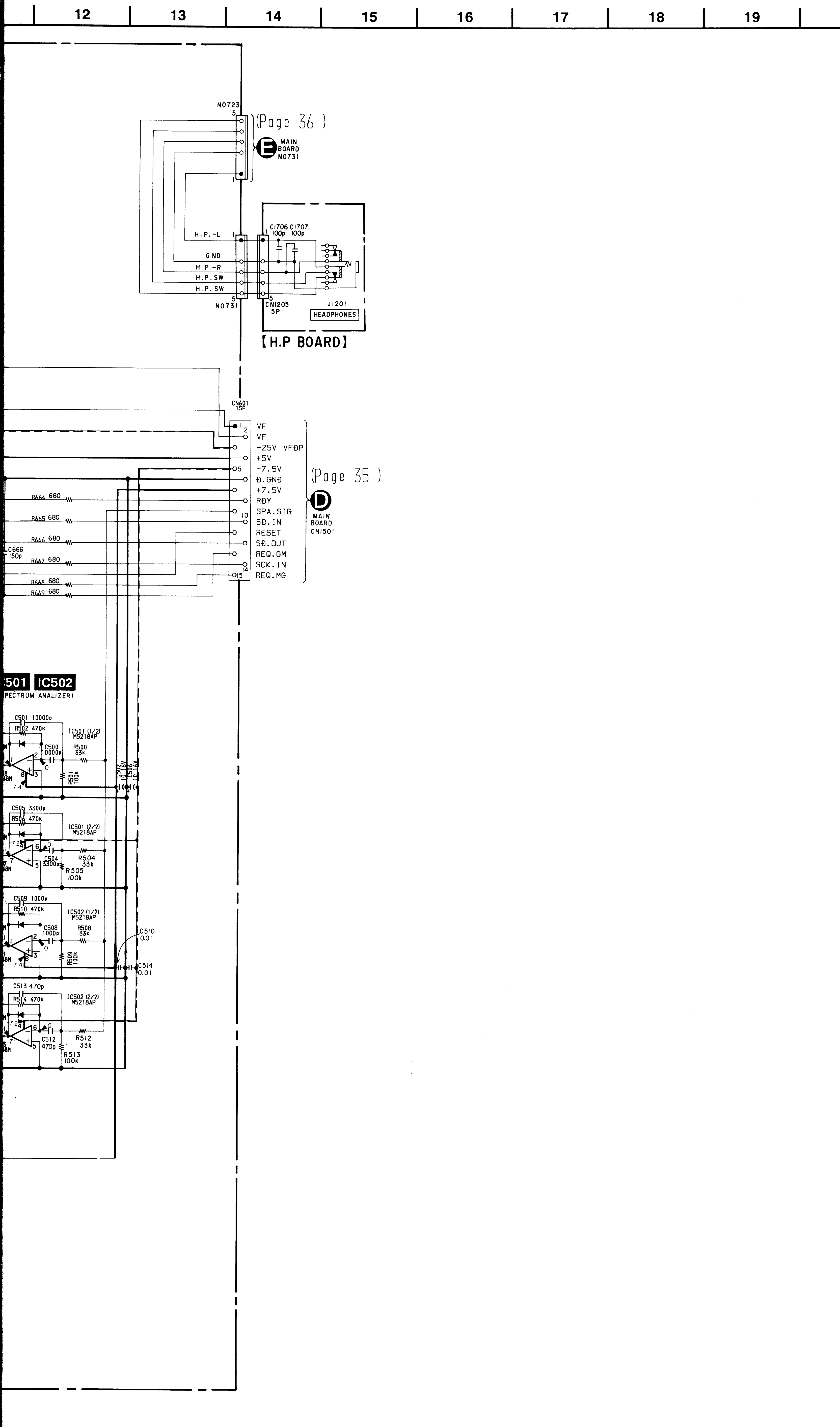
⇨ :FM

▷ :MIC

6-18. SCHEMATIC DIAGRAM — PANEL SECTION —

• See page 66 for IC Pin Functions. (IC608)


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
[PANEL BOARD]
FL601 FLUORESCENT INDICATOR TUBE
IC608
IC608 CXP82612
GRAPHIC CONTROL
5Vp-p 4MHz
RV601
VOLUME
IC602
IC602 GP1U50XB
REMOTE CONTROL RECEIVER
C601 47 10V
C604 0.01
C605 0.01
N300 MODEL
DISP<->MAIN
CD SYNCRO
HIGH SPEED DUBBING
FUNCTION
SURROUND
DBFB
TIMERSET
DAILY
REC (TIMER)
CLOCK SET
ENTER /NEXT
DISPLAY
TUNING MEMORY
TUNING MODE
—TUNING—
TUNER /BAND
[CD PANEL BOARD] (1/2)
[OPEN/CLOSE BOARD]
DIRECTION MODE
OPEN/ CLOSE
REPEAT
PLAY MODE
DOLBY NR
TAPE REWIND
DECK SELECT
TAPE
N300 MODEL
N300K MODEL
KARAOKE PON/MIX
# UP
♭ DOWN
●REC
P.FILE
EQ MEMORY
DANCE/5
CLASSIC/4
JAZZ/3
POPS/2
ROCK/1
SLEEP
SYSTEM POWER
N300 MODEL
[TC PANEL BOARD]
IC501
BPF(SPECTRUM
150HZ
460HZ
1.5KHZ
6.6KHZ
Q611 BN1A4M SWITCH
Q612 BA1A4M SWITCH
N300K MODEL
R556 47k
N300K MODEL
D617-622 SEL5221S
ROCK/1
POPS/2
JAZZ/3
CLASSIC/4
P.FILE
Q616 2SA1175
Q615 2SA1175
DECK B
DECK A
●REC
KEY CONTROL
TUNER /BAND
— CD —
— TAPE —
DANCE/5
N300K MODEL
D626,627
(N300 MODEL) SEL5421E
(N300K MODEL) SEL58420C
Q608-610
LED SWITCH
D613-616
(N300 MODEL) SEL5421E
(N300K MODEL) SEL58420C
Q601-606,615
LED SWITCH
[CD PANEL BOARD] (2/2)
09

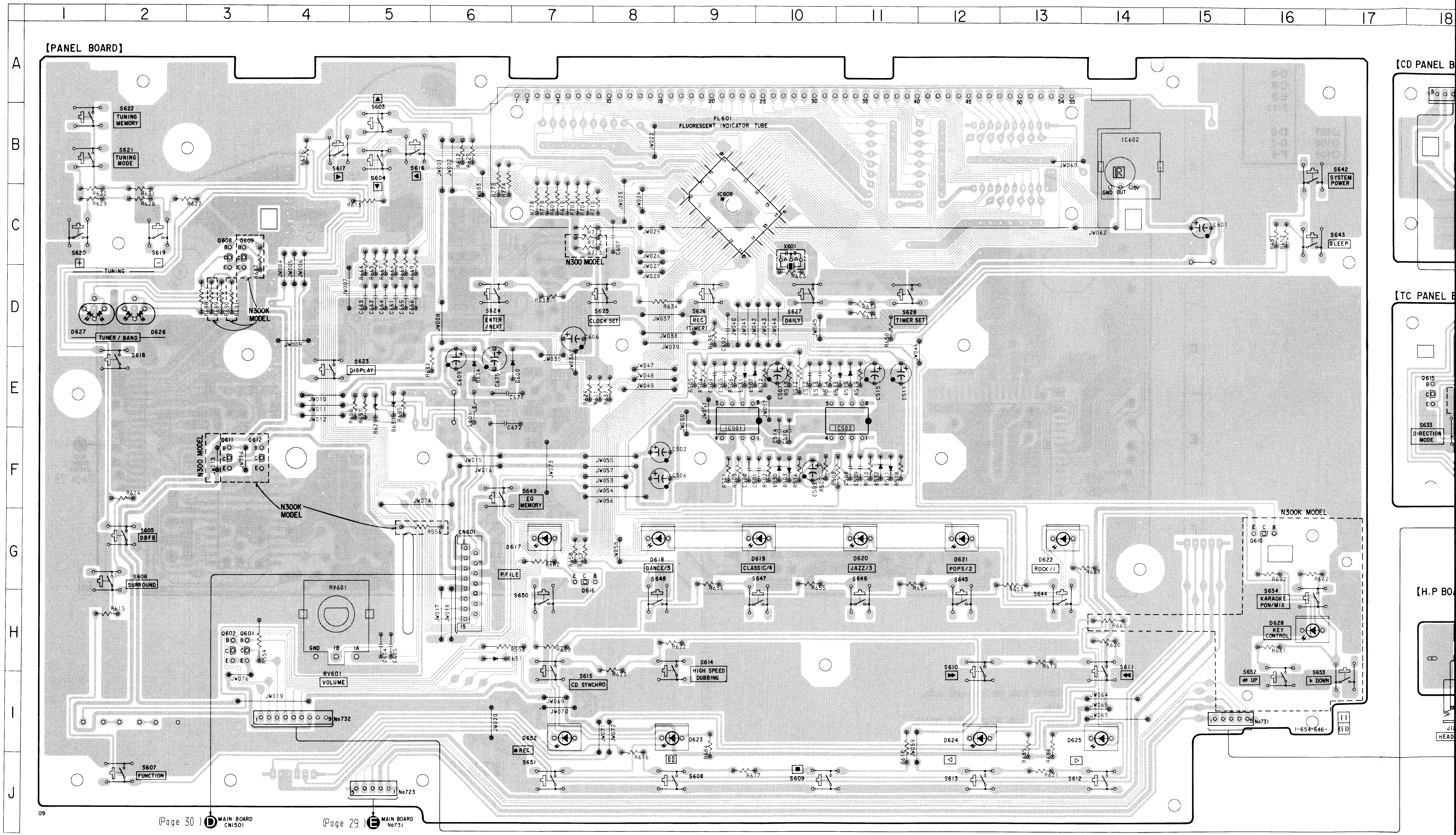

12
13
14
15
16
17
18
19
20
NO723
5
1
(Page 36)
E
MAIN
BOARD
NO731
H.P.-L
GND
H.P.-R
H.P.SW
H.P.SW
NO731
C1706 C1707
100p 100p
CN1205
5P
J1201
HEADPHONES
[H.P BOARD]
CN601
15P
VF
VF
-25V VFΘP
+5V
-7.5V
Θ.GNΘ
+7.5V
RΘY
SPA.SIG
SΘ.IN
RESET
SΘ.OUT
REQ.GM
SCK.IN
REQ.MG
(Page 35)
D
MAIN
BOARD
CN1501
R664 680
R665 680
R666 680
C666
150p
R667 680
R668 680
R669 680
501
IC502
PECTRUM ANALIZER)
C501 10000p
R502 470k
IC501 (1/2)
M5218AP
C500
10000p
R500
33k
R501
100k
7.4
C502
10 16V
C506
10 16V
C505 3300p
R506 470k
IC501 (2/2)
M5218AP
-7.2
C504
3300p
R504
33k
R505
100k
C509 1000p
R510 470k
IC502 (1/2)
M5218AP
C508
1000p
R508
33k
R509
100k
C510
0.01
C514
0.01
C513 470p
R514 470k
IC502 (2/2)
M5218AP
C512
470p
R512
33k
R513
100k

Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ▭ : panel designation.
- ▬ : B+ Line
- ▪▪▪▪▪ : B– Line
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  * : can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variaticns may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.

6-19. PRINTED WIRING BOARD — PANEL SECTION —
- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.

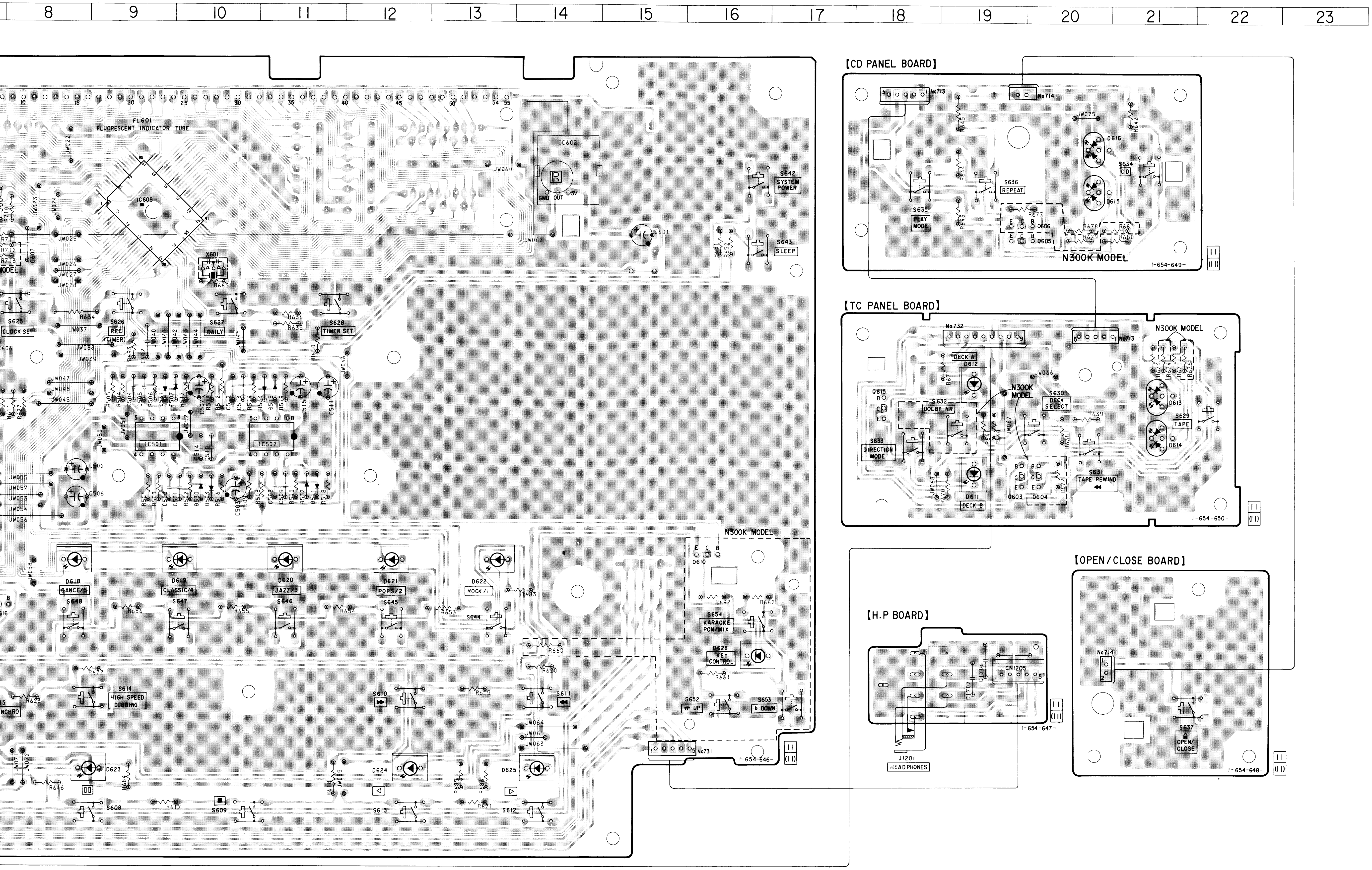
Note:
- ■ : parts mounted on the conductor side.
- △ : internal component.
- ▒ : Pattern from the side which enable seeing.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
A B C D E F G H I J
[PANEL BOARD]
[CD PANEL B
[TC PANEL
[H.P BO
FL601 FLUORESCENT INDICATOR TUBE
IC602
IC608
IC501
IC502
X601
S622 TUNING MEMORY
S621 TUNING MODE
S620 +
S619 −
TUNING
D627 TUNER/BAND D626
S618
S603
S617
S604
S616
S623 DISPLAY
S624 ENTER/NEXT
S625 CLOCK SET
S626 REC (TIMER)
S627 DAILY
S628 TIMER SET
S642 SYSTEM POWER
S643 SLEEP
S633 DIRECTION MODE
S649 EQ MEMORY
S605 DBFB
S606 SURROUND
S607 FUNCTION
N300 MODEL
N300K MODEL
CN601
RV601 VOLUME
GND 1B 1A
P.FILE
D617
D618 DANCE/5
D619 CLASSIC/4
D620 JAZZ/3
D621 POPS/2
D622 ROCK/1
S648
S647
S646
S645
S644
S650
S654 KARAOKE PON/MIX
D628 KEY CONTROL
S652 # UP
S653 ♭ DOWN
S614 HIGH SPEED DUBBING
S615 CD SYNCHRO
S610 ▶▶
S611 ◀◀
D652 ●REC
S651
D623
S608
S609 ■
D624
S613 ◁
D625
S612 ▷
No732
No723
No731
1-654-646-
GND OUT 5V
(Page 30) D MAIN BOARD CN1501
(Page 29) E MAIN BOARD No731

n the conductor side.
ent.

- ▨ : Pattern from the side which enable seeing.


8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
FL601
FLUORESCENT INDICATOR TUBE
IC602
IC608
X601
GND OUT 5V
C601
S642 SYSTEM POWER
S643 SLEEP
S625 CLOCK SET
S626 REC (TIMER)
S627 DAILY
S628 TIMER SET
IC501
IC502
C502
C506
N300K MODEL
D618 DANCE/5
D619 CLASSIC/4
D620 JAZZ/3
D621 POPS/2
D622 ROCK/I
S648
S647
S646
S645
S644
Q610
S654 KARAOKE PON/MIX
D628 KEY CONTROL
S652 # UP
S653 ♭ DOWN
S614 HIGH SPEED DUBBING
S610
S611
D623
D624
D625
S608
S609
S613
S612
No731
1-654-646-
[CD PANEL BOARD]
No713
No714
D616
D615
S634 CD
S636 REPEAT
S635 PLAY MODE
Q606
Q605
N300K MODEL
1-654-649-
[TC PANEL BOARD]
No732
No713
N300K MODEL
DECK A
D612
Q615
S632 DOLBY NR
S633 DIRECTION MODE
S630 DECK SELECT
D613
S629 TAPE
D614
S631 TAPE REWIND ◀◀
D611 DECK B
Q603
Q604
1-654-650-
[OPEN/CLOSE BOARD]
No714
S637 ≜ OPEN/CLOSE
1-654-648-
[H.P BOARD]
CN1205
J1201 HEADPHONES
1-654-647-

- **Semiconductor Location**

Ref. No.	Location
D503	F-10
D507	E-9
D511	F-12
D515	E-11
D530	F-10
D531	E-9
D532	F-11
D533	E-10
D600	E-7
D611	F-19
D612	E-19
D613	E-21
D614	E-21
D615	C-20
D616	B-20
D617	G-7
D618	G-8
D619	G-9
D620	G-11
D621	G-12
D622	G-14
D623	I-8
D624	I-12
D625	I-14
D626	D-2
D627	D-1
D628	H-16
D629	E-5
D630	E-5
D634	E-6
D651	H-6
D652	I-7
IC501	F-9
IC502	F-11
IC602	C-14
IC608	C-9
Q601	H-3
Q602	H-3
Q603	F-19
Q604	H-18
Q605	C-19
Q606	C-19
Q608	C-3
Q609	C-3
Q610	G-16
Q611	F-3
Q612	F-3
Q615	E-18
Q616	G-7

6-20. IC PIN FUNCTIONS — PANEL SECTION —

- **IC608 GRAPHIC CONTROL (CXP82612-006Q/009Q) IC PIN FUNCTIONS**

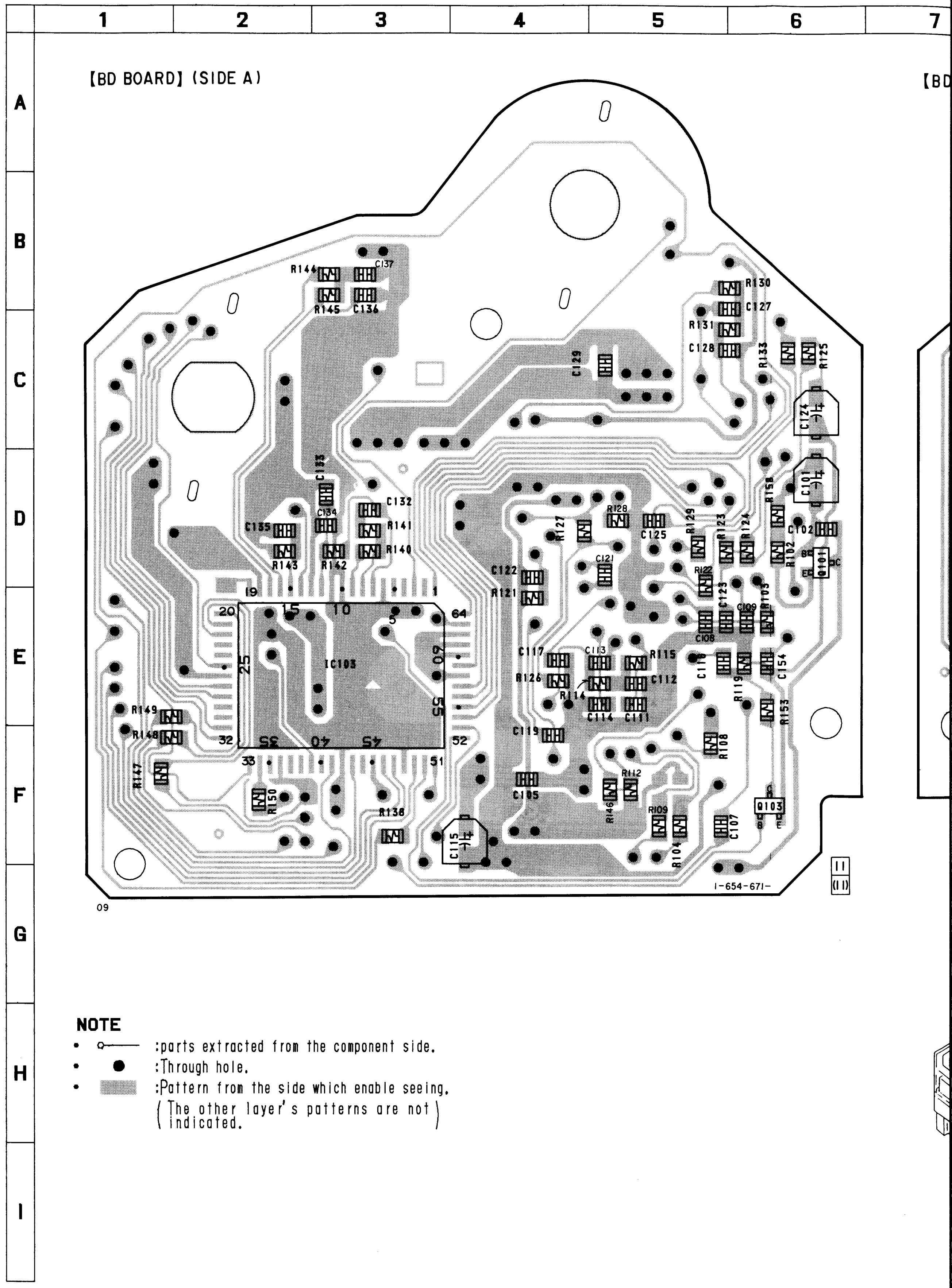
Pin No.	Pin Name	I/O	Function
1	ENC1A	I	Volume encoder signal input.
2	SIRCS	I	SIRCS signal input.
3	REQ. MG	I	Request signal from master control.
4	REQ. GM	O	Request signal to master control.
5 –9	LED1–5	O	LED drive signal output.
10	RDY	I/O	RDY signal from/to master control.
11	SCK IN	I	Serial clock input.
12	SD IN	I	Serial data input.
13	SD OUT	O	Serial data output.
14–21	LED6–13	O	LED drive signal output.
22–25	KEY1–4	I	Key matrix input.
26–29	BPF1–4	I	Spectram analizer signal input.
30	RST	I	Reset signal input.
31	X IN	I	X'tal (4MHz).
32	X OUT	O	
33	Vss	–	GND
34–58	AN1–25	O	FL segment signal output.
59–70	GR1–12	O	FL grid signal output.
71	VFDP	–	–25V for FL
72	VDD	–	+5V
73, 74	PD	I	Not used. (Pull up)
75	VDD	–	+5V
76, 77	LED14, 15	O	LED drive signal output.
78, 79	ENC2B, A	I	Not used. (Pull up)
80	ENC1B	I	Volume encoder signal input.

- **Semiconductor Location**

Ref. No.	Location
IC101	D-9
IC102	C-8
IC103	E-3
IC104	F-11
Q101	D-6
Q102	D-7
Q103	F-6

6-21. PRINTED WIRING BOARD — CD SECTION —

- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
[BD BOARD] (SIDE A)
IC103
R144
C137
R145
C136
R130
C127
R131
C128
R133
R125
C129
C124
C133
C134
C132
R141
R140
C135
R143
R142
R128
C125
R127
R129
R123
R124
R152
C101
C102
R102
Q101
C122
R121
C121
R122
C123
C109
R103
C108
C117
C113
R115
R126
R114
C112
C114
C111
C110
R119
R153
C154
C119
R108
R149
R148
R147
R150
C105
R112
R146
R109
R104
C107
Q103
R138
C115
1-654-671-
09

NOTE

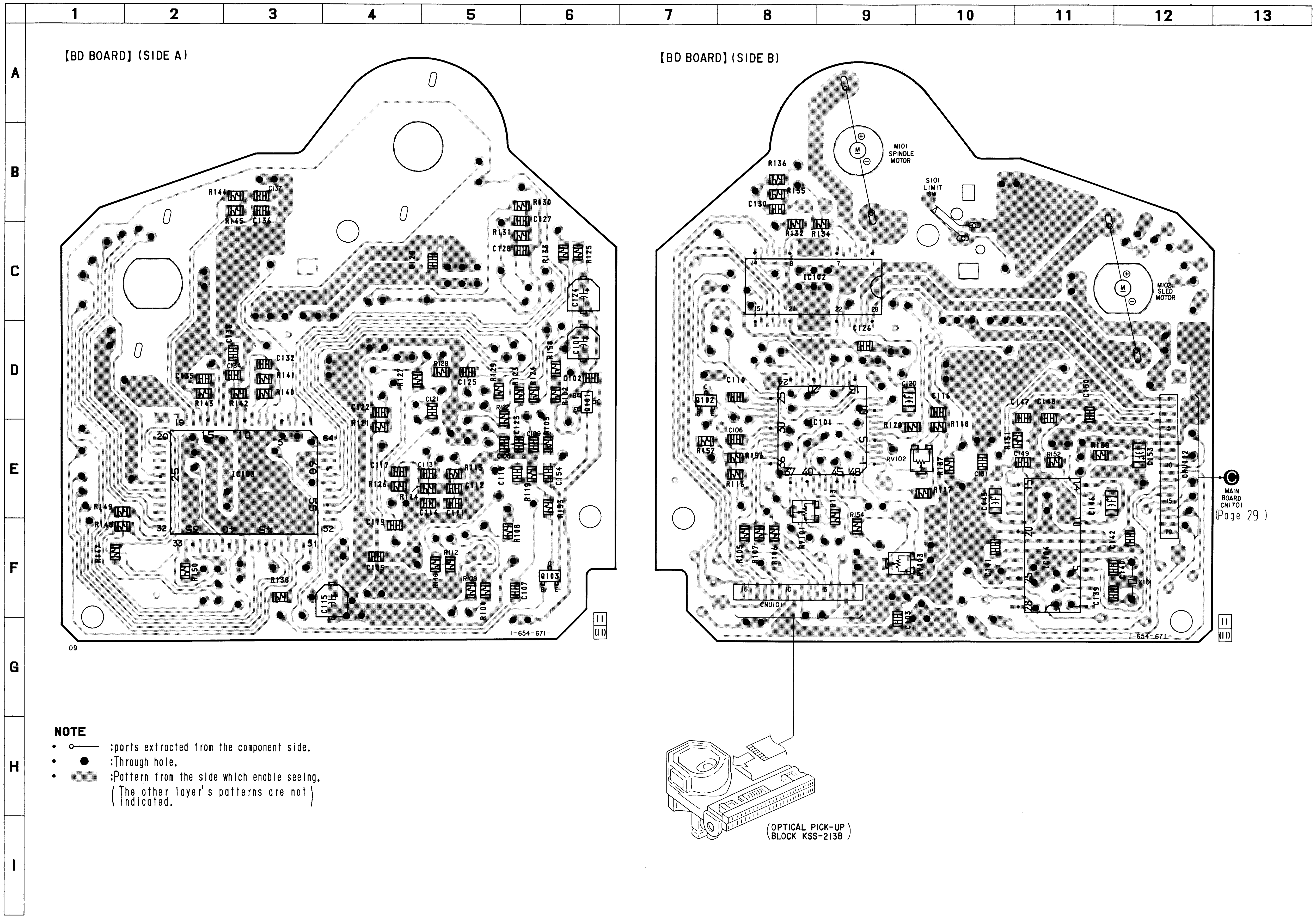
- ○—— :parts extracted from the component side.
- ● :Through hole.
- ▨ :Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)

6-21. PRINTED WIRING BOARD — CD SECTION —

- See page 27 for Circuit Boards Location.
- See page 28 for Semiconductor Lead Layouts.

- **Semiconductor Location**

Ref. No.	Location
IC101	D-9
IC102	C-8
IC103	E-3
IC104	F-11
Q101	D-6
Q102	D-7
Q103	F-6



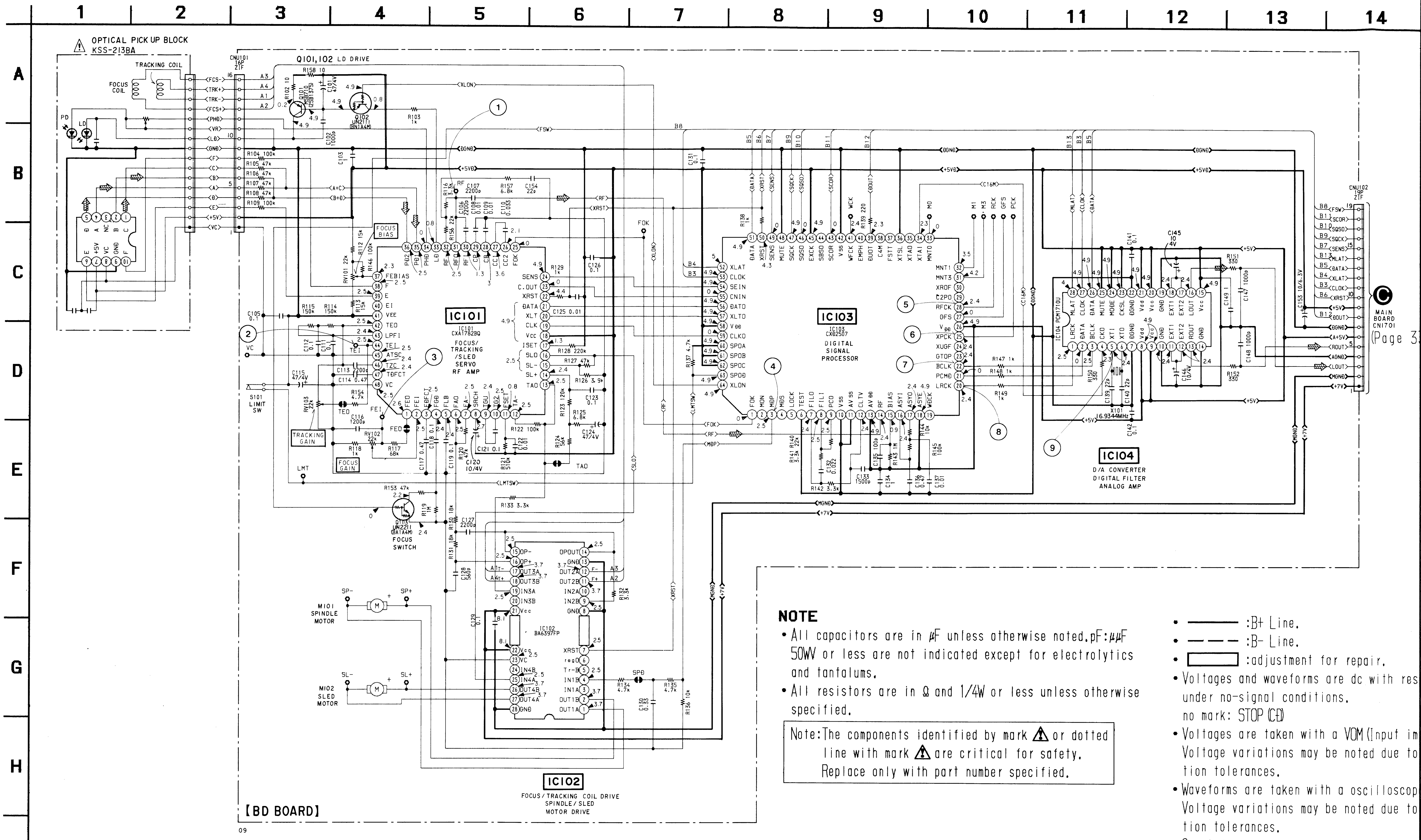
1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
[BD BOARD] (SIDE A)
[BD BOARD] (SIDE B)
IC103
IC101
IC102
IC104
M101 SPINDLE MOTOR
S101 LIMIT SW
M102 SLED MOTOR
CNU101
CNU102
RV101
RV102
RV103
Q101
Q102
Q103
X101
MAIN BOARD CN1701
(Page 29)
1-654-671-
09
(OPTICAL PICK-UP BLOCK KSS-213B)

NOTE

- o—— :parts extracted from the component side.
- ● :Through hole.
- ▨ :Pattern from the side which enable seeing.
  (The other layer's patterns are not indicated.)

6-22. SCHEMATIC DIAGRAM — CD SECTION —

• See page 72 for IC Block Diagrams. (IC101, 102, 103, 104, 301)



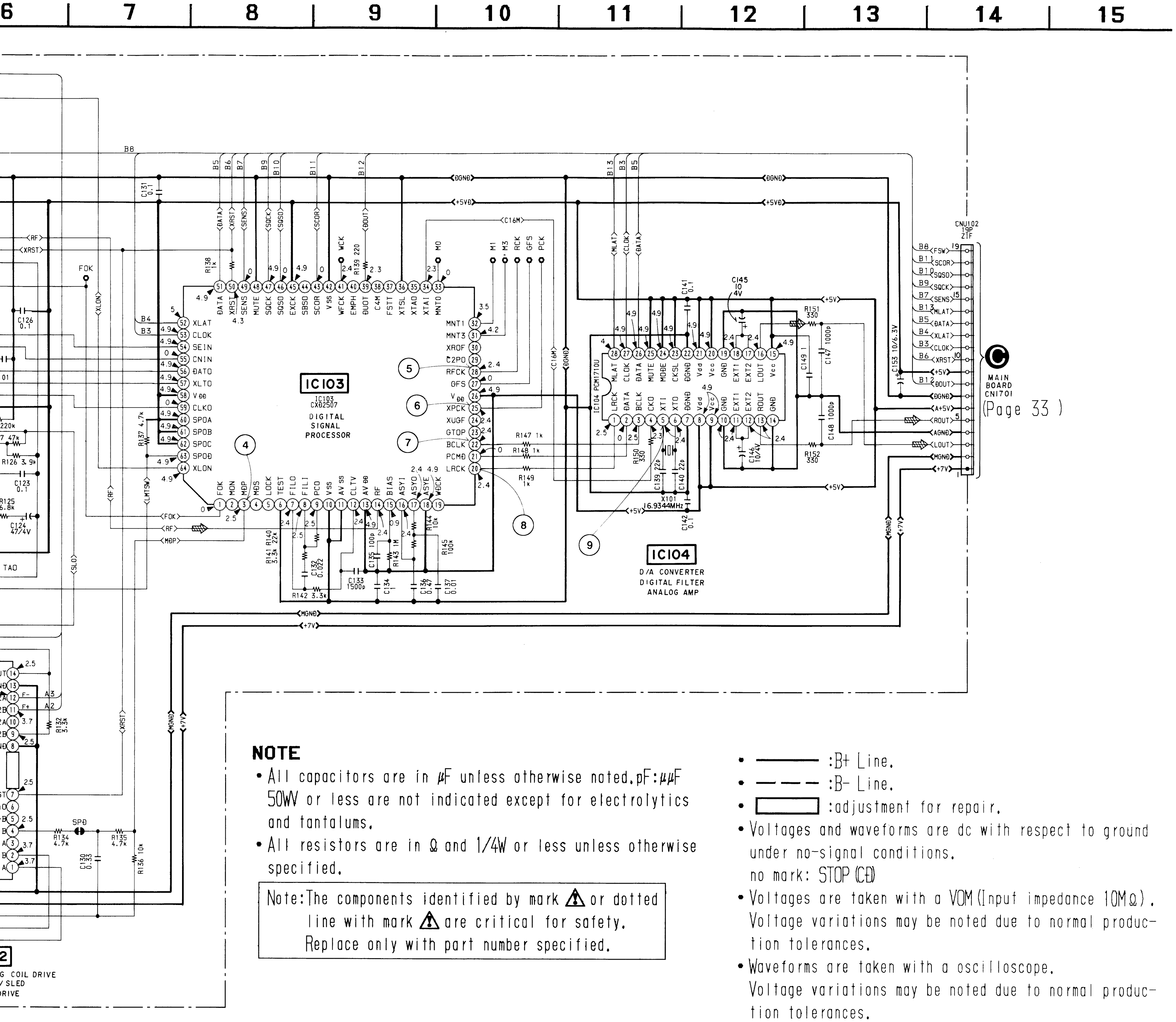
OPTICAL PICK UP BLOCK
KSS-213BA
TRACKING COIL
FOCUS COIL
PD
LD
CNU101 16P ZIF
Q101,102 LD DRIVE
Q101 2SB1375
Q102 UN2111 (BN1A4M)
FOCUS BIAS
TRACKING GAIN
FOCUS GAIN
S101 LIMIT SW
LMT
IC101
IC101 CXA1782BQ
FOCUS/ TRACKING /SLED SERVO RF AMP
Q103 UN2211 (BATA4M) FOCUS SWITCH
M101 SPINDLE MOTOR
M102 SLED MOTOR
IC102
IC102 BA6397FP
FOCUS/TRACKING COIL DRIVE SPINDLE/SLED MOTOR DRIVE
[BD BOARD]
IC103
IC103 CXD2507
DIGITAL SIGNAL PROCESSOR
IC104
IC104 PCM1710U
D/A CONVERTER DIGITAL FILTER ANALOG AMP
X101 16.9344MHz
CNU102 19P ZIF
C
MAIN BOARD CN1701
(Page 3

NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ——— : B+ Line.
- – – – : B- Line.
- ☐ : adjustment for repair.
- Voltages and waveforms are dc with res under no-signal conditions.
  no mark: STOP (CD)
- Voltages are taken with a VOM (Input im Voltage variations may be noted due to tion tolerances.
- Waveforms are taken with a oscilloscop Voltage variations may be noted due to tion tolerances.
- Circled numbers refer to waveforms.


6
7
8
9
10
11
12
13
14
15
IC103
IC103 CXD2507
DIGITAL SIGNAL PROCESSOR
IC104
D/A CONVERTER
DIGITAL FILTER
ANALOG AMP
IC104 PCM1710U
CNU102 19P ZIF
MAIN BOARD CN1701
(Page 33)
X101 16.9344MHz
XLAT
CLOK
SEIN
CNIN
DATO
XLTO
VDD
CLKO
SPOA
SPOB
SPOC
SPOD
XLON
MNT1
MNT3
XROF
C2PO
RFCK
GFS
XPCK
XUGF
GTOP
BCLK
PCMD
LRCK
DGND
+5VD
MGND
+7V
FOK
RF
MDP
2 COIL DRIVE / SLED DRIVE
SPD

NOTE

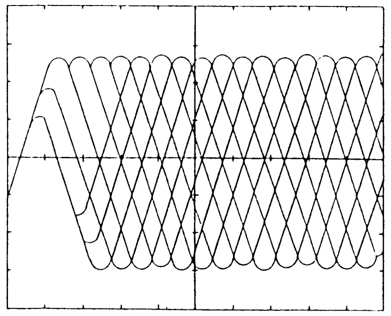
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

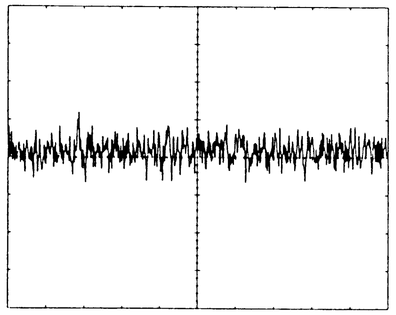
- ——— :B+ Line.
- – – – :B- Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: STOP (CD)
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

- **Waveforms.**

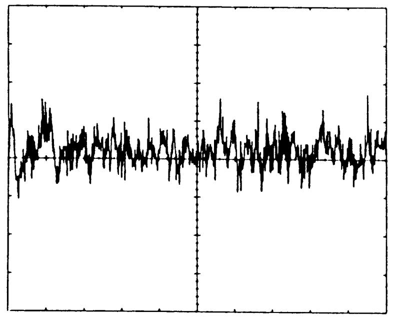
❶ IC101 ㉛ 1.4Vp-p



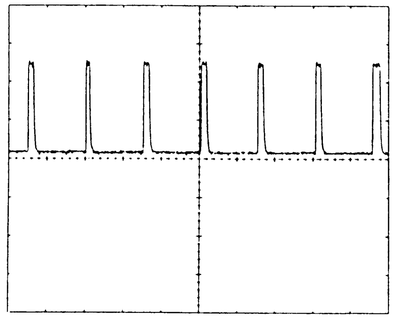
❷ IC101 ㊹ 8mVp-p 0.2ms/DIV



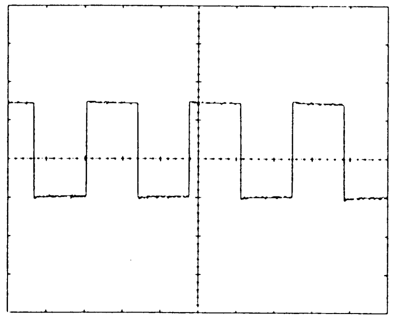
❸ IC101 ② 20mVp-p 2ms/DIV



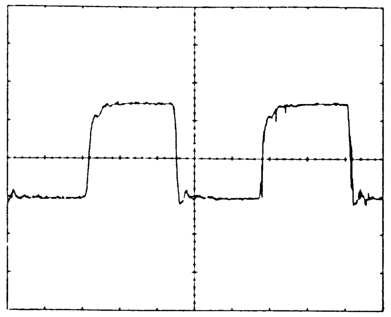
❹ IC103 ③ 2.4Vp-p 7.5μsec



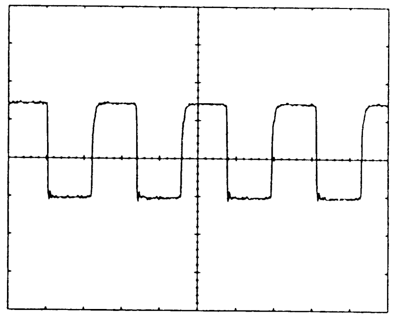
❺ IC103 ㉘ 5.1Vp-p 137μsec



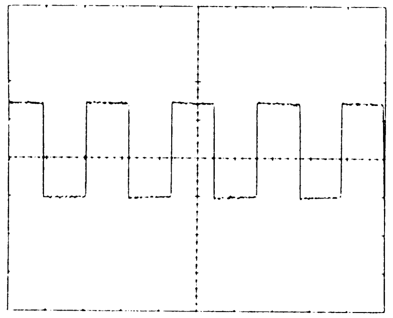
❻ IC103 ㉕ 5.1Vp-p 232.7μsec



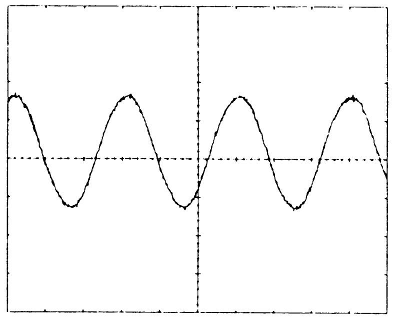
❼ IC103 ㉒ 5.1Vp-p 472.7μsec



❽ IC103 ⑳ 5.1Vp-p 23μsec

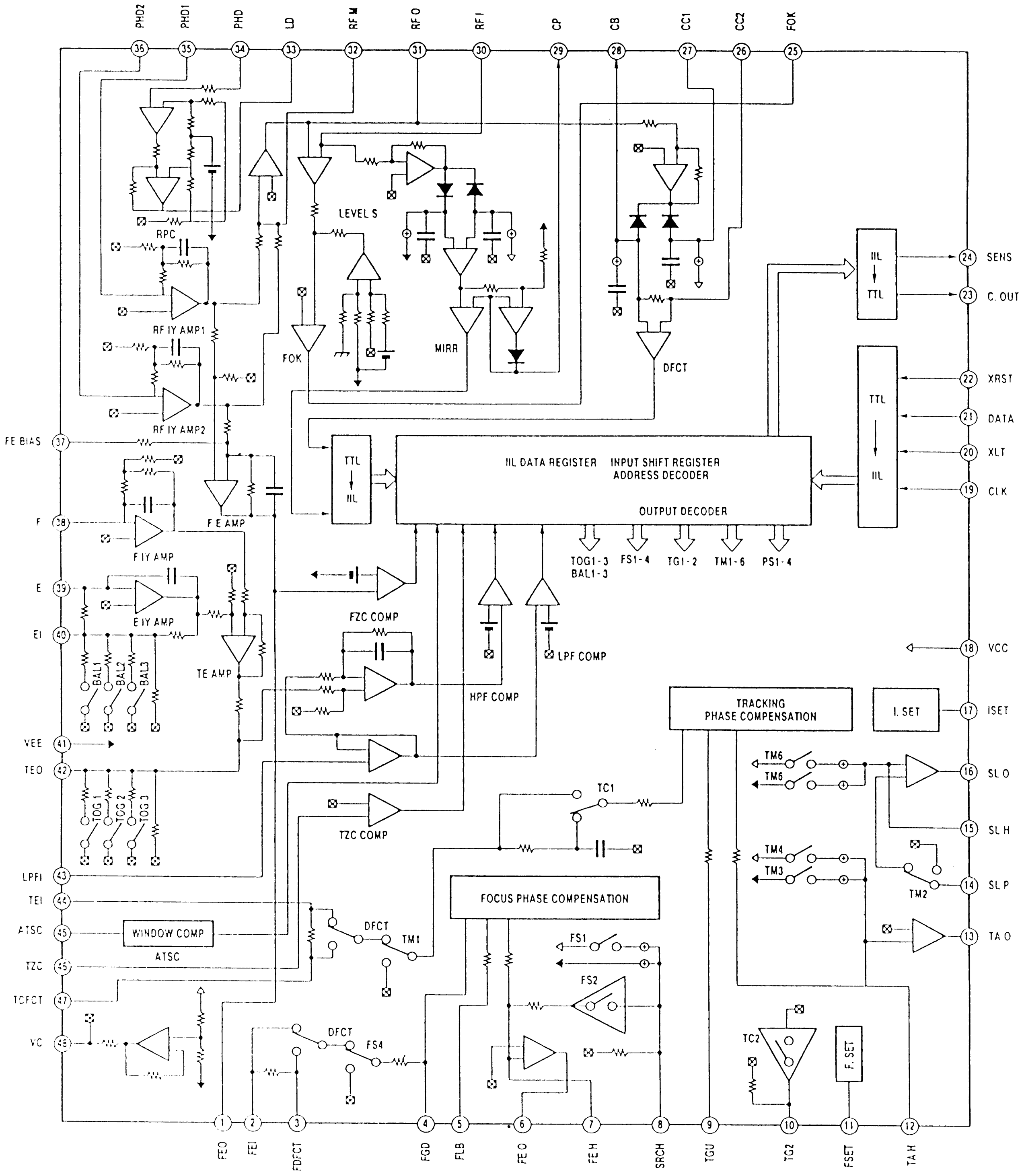


❾ IC104 ⑤ 3Vp-p 16.9344MHz



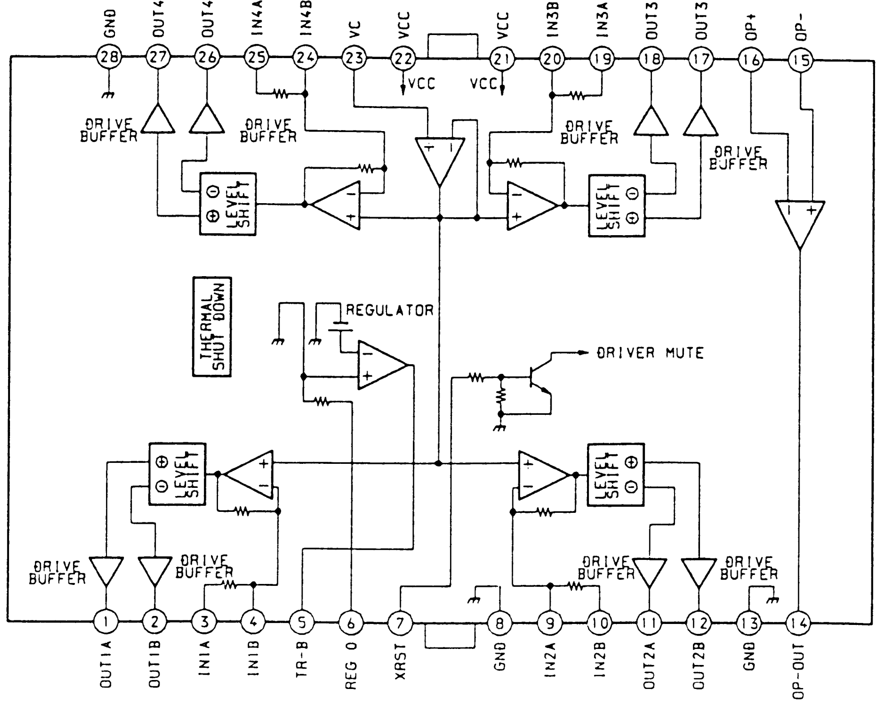
6-23. IC BLOCK DIAGRAMS — CD SECTION —

IC101 CXA1782BQ



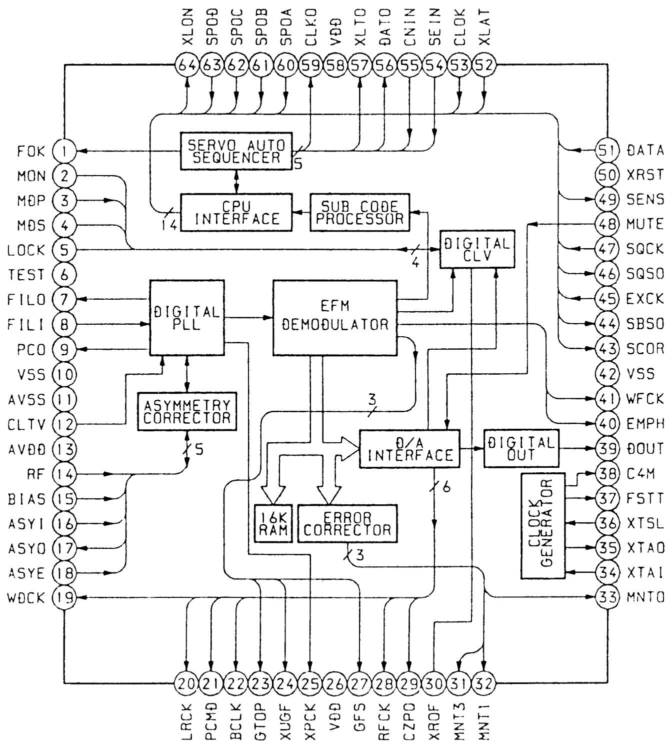
PHD2
PHD1
PHD
LD
RFM
RFO
RFI
CP
CB
CC1
CC2
FOK
SENS
C. OUT
XRST
DATA
XLT
CLK
VCC
ISET
SLO
SLM
SLP
TAO
FE BIAS
F
E
EI
VEE
TEO
LPFI
TEI
ATSC
TZC
TCFCT
VC
FEO
FEI
FDFCT
FGD
FLB
FE O
FEM
SRCH
TGU
TG2
FSET
TA M
RPC
RF IY AMP1
RF IY AMP2
LEVEL S
FOK
MIRR
DFCT
IIL
TTL
IIL DATA REGISTER INPUT SHIFT REGISTER
ADDRESS DECODER
OUTPUT DECODER
TOG1-3
BAL1-3
FS1-4
TG1-2
TM1-6
PS1-4
FE AMP
FIY AMP
E IY AMP
TE AMP
BAL1
BAL2
BAL3
TOG1
TOG2
TOG3
FZC COMP
HPF COMP
LPF COMP
TZC COMP
TRACKING
PHASE COMPENSATION
I. SET
TM6
TM5
TM4
TM3
TM2
TC1
TM1
WINDOW COMP
ATSC
FOCUS PHASE COMPENSATION
FS1
FS2
FS4
DFCT
TC2
F. SET

IC102 BA6397FP



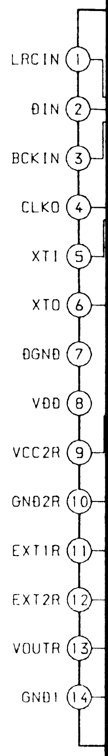
GND
OUT4A
OUT4B
IN4A
IN4B
VC
VCC
VCC
IN3B
IN3A
OUT3B
OUT3A
OP+
OP-
DRIVE BUFFER
LEVEL SHIFT
THERMAL SHUT DOWN
REGULATOR
DRIVER MUTE
OUT1A
OUT1B
IN1A
IN1B
TR-B
REG O
XRST
GND
IN2A
IN2B
OUT2A
OUT2B
GND
OP-OUT

IC103 CXD2507



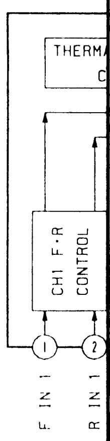
XLON
SPOD
SPOC
SPOB
SPOA
CLKO
VDD
XLTO
DATO
CNIN
SEIN
CLOK
XLAT
FOK
MON
MDP
MDS
LOCK
TEST
FILO
FILI
PCO
VSS
AVSS
CLTV
AVDD
RF
BIAS
ASYI
ASYO
ASYE
WDCK
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
SBSO
SCOR
VSS
WFCK
EMPH
DOUT
C4M
FSTT
XTSL
XTAO
XTAI
MNTO
SERVO AUTO SEQUENCER
CPU INTERFACE
SUB CODE PROCESSOR
DIGITAL CLV
DIGITAL PLL
EFM DEMODULATOR
ASYMMETRY CORRECTOR
D/A INTERFACE
DIGITAL OUT
16K RAM
ERROR CORRECTOR
CLOCK GENERATOR
LRCK
PCMD
BCLK
GTOP
XUGF
XPCK
VDD
GFS
RFCK
C2PO
XROF
MNT3
MNT1

IC104 PC



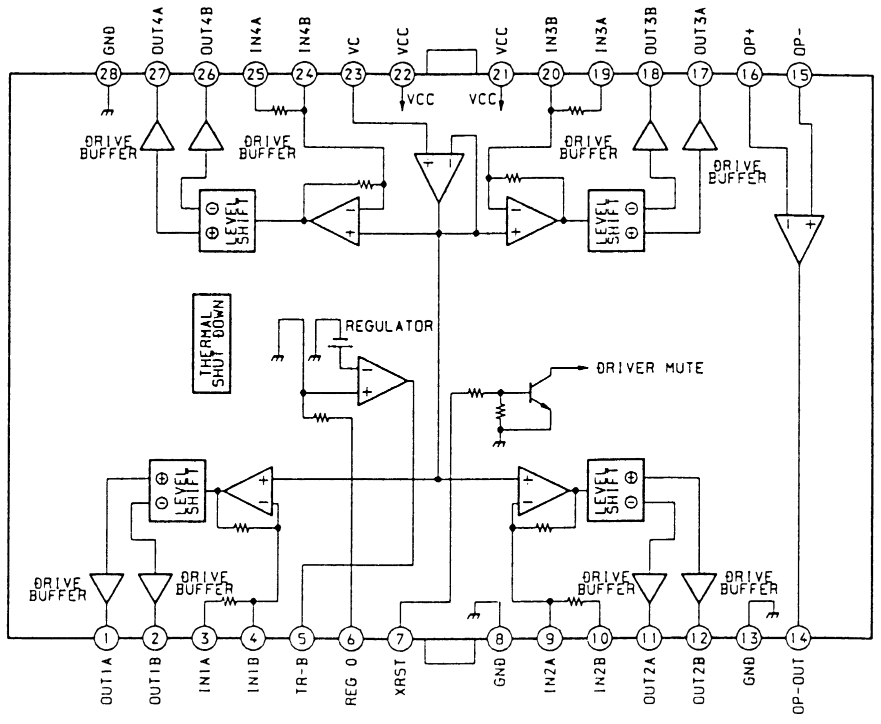
LRCIN
DIN
BCKIN
CLKO
XTI
XTO
DGND
VDD
VCC2R
GND2R
EXT1R
EXT2R
VOUTR
GND1

IC301 B

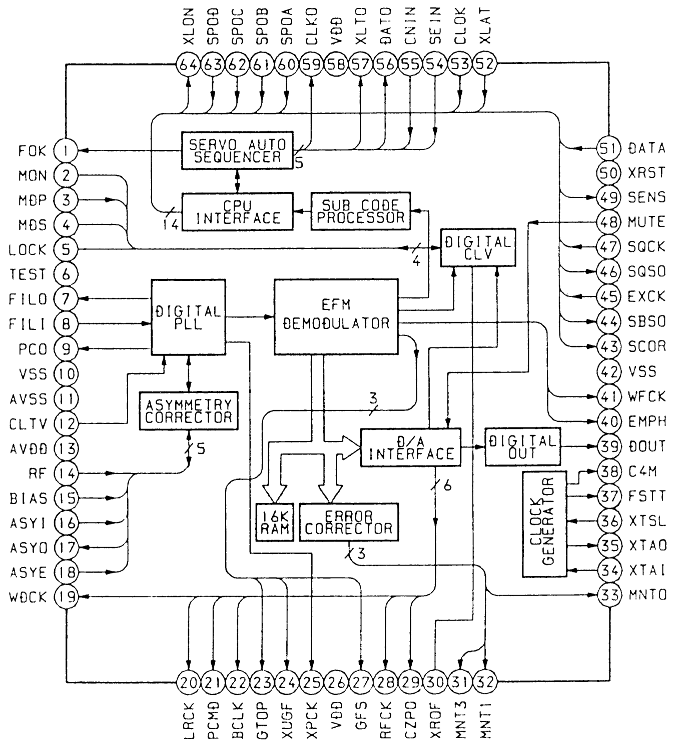


THERM
CH1 F·R CONTROL
F IN 1
R IN 1

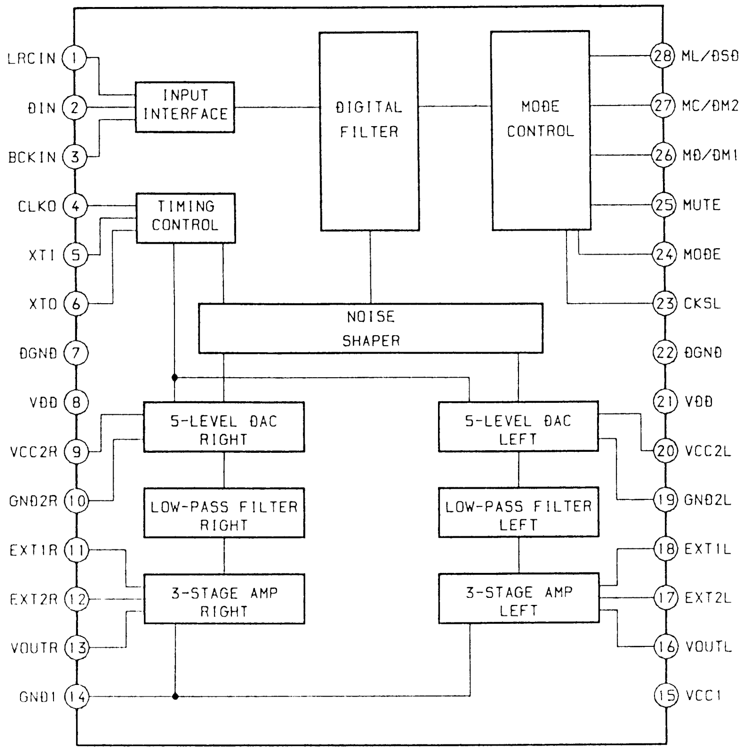
IC102 BA6397FP


GND
OUT4A
OUT4B
IN4A
IN4B
VC
VCC
VCC
IN3B
IN3A
OUT3B
OUT3A
OP+
OP-
VCC
VCC
DRIVE BUFFER
DRIVE BUFFER
DRIVE BUFFER
DRIVE BUFFER
LEVEL SHIFT
LEVEL SHIFT
THERMAL SHUT DOWN
REGULATOR
DRIVER MUTE
LEVEL SHIFT
LEVEL SHIFT
DRIVE BUFFER
DRIVE BUFFER
DRIVE BUFFER
DRIVE BUFFER
OUT1A
OUT1B
IN1A
IN1B
TR-B
REG O
XRST
GND
IN2A
IN2B
OUT2A
OUT2B
GND
OP-OUT

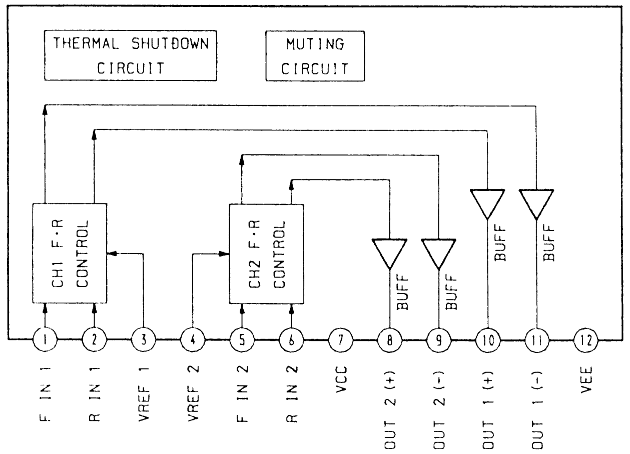
IC103 CXD2507


XLON
SPDD
SPDC
SPDB
SPDA
CLKO
VDD
XLTO
DATO
CNIN
SEIN
CLOK
XLAT
FOK
MON
MDP
MDS
LOCK
TEST
FILO
FILI
PCO
VSS
AVSS
CLTV
AVDD
RF
BIAS
ASYI
ASYO
ASYE
WDCK
SERVO AUTO SEQUENCER
CPU INTERFACE
SUB CODE PROCESSOR
DIGITAL CLV
DIGITAL PLL
EFM DEMODULATOR
ASYMMETRY CORRECTOR
D/A INTERFACE
DIGITAL OUT
16K RAM
ERROR CORRECTOR
CLOCK GENERATOR
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
SBSO
SCOR
VSS
WFCK
EMPH
DOUT
C4M
FSTT
XTSL
XTAO
XTAI
MNTO
LRCK
PCMD
BCLK
GTOP
XUGF
XPCK
VDD
GFS
RFCK
C2PO
XROF
MNT3
MNT1

IC104 PCM1710U

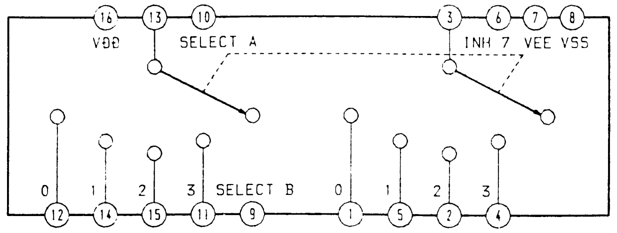

LRCIN
DIN
BCKIN
CLKO
XTI
XTO
DGND
VDD
VCC2R
GND2R
EXT1R
EXT2R
VOUTR
GND1
INPUT INTERFACE
DIGITAL FILTER
MODE CONTROL
TIMING CONTROL
NOISE SHAPER
5-LEVEL DAC RIGHT
5-LEVEL DAC LEFT
LOW-PASS FILTER RIGHT
LOW-PASS FILTER LEFT
3-STAGE AMP RIGHT
3-STAGE AMP LEFT
ML/DSD
MC/DM2
MD/DM1
MUTE
MODE
CKSL
DGND
VDD
VCC2L
GND2L
EXT1L
EXT2L
VOUTL
VCC1

IC301 BA6191

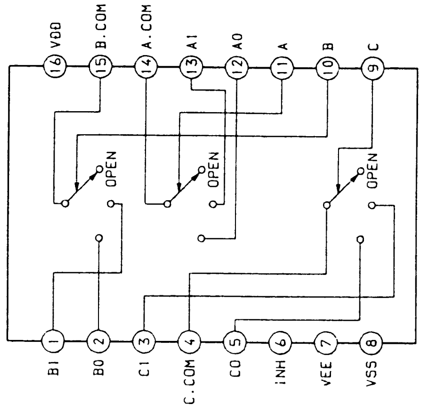

THERMAL SHUTDOWN CIRCUIT
MUTING CIRCUIT
CH1 F·R CONTROL
CH2 F·R CONTROL
BUFF
BUFF
BUFF
BUFF
F IN 1
R IN 1
VREF 1
VREF 2
F IN 2
R IN 2
VCC
OUT 2 (+)
OUT 2 (-)
OUT 1 (+)
OUT 1 (-)
VEE

6-24. IC BLOCK DIAGRAMS — MAIN SECTION —

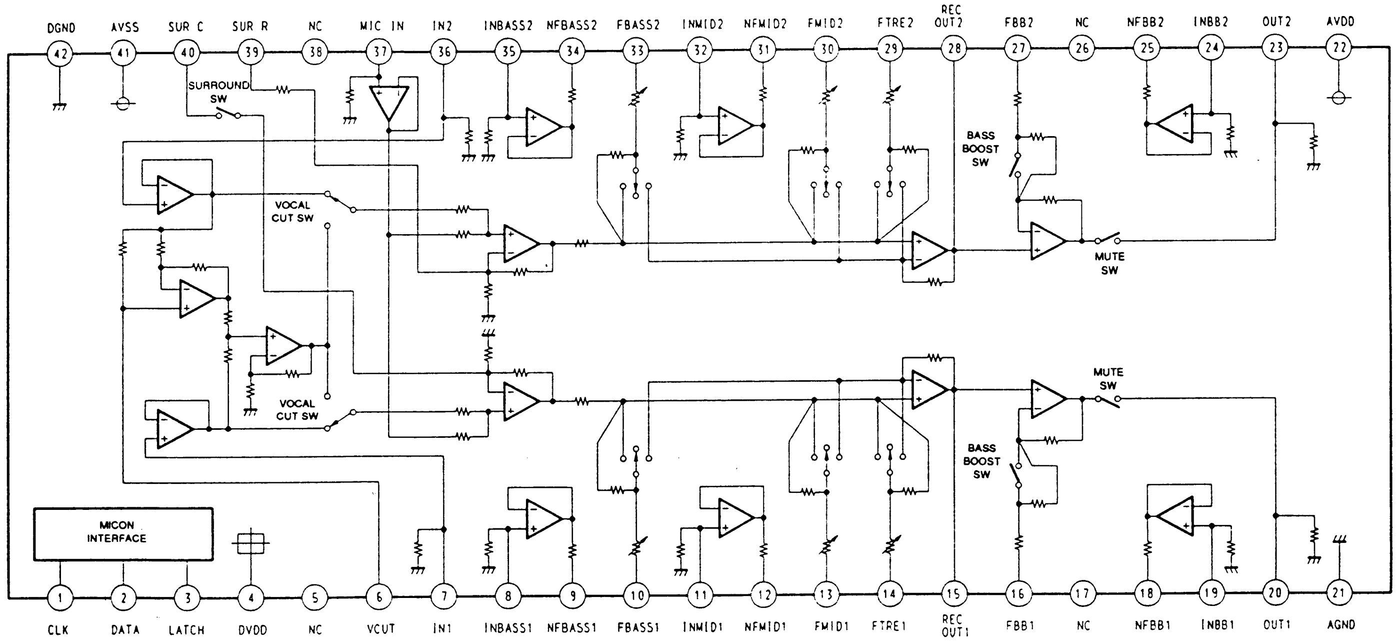
IC1002 MC14052BCP


VDD
SELECT A
INH
VEE
VSS
SELECT B
0
1
2
3
16
13
10
3
6
7
8
12
14
15
11
9
1
5
2
4

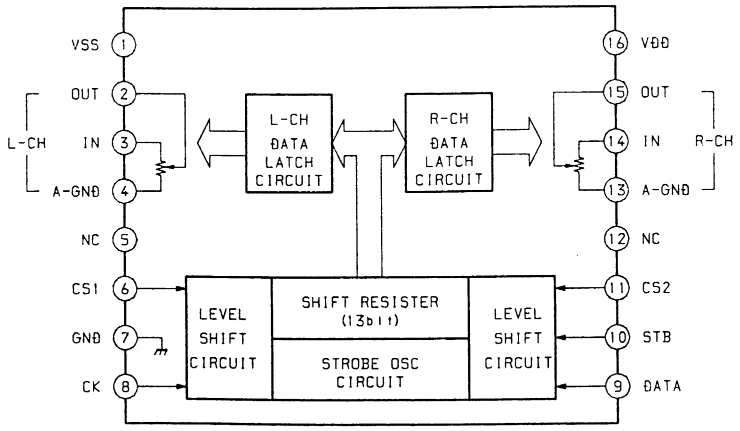
IC1003 MC14053BCP


VDD
B.COM
A.COM
A1
A0
A
B
C
OPEN
OPEN
OPEN
B1
B0
C1
C.COM
C0
INH
VEE
VSS

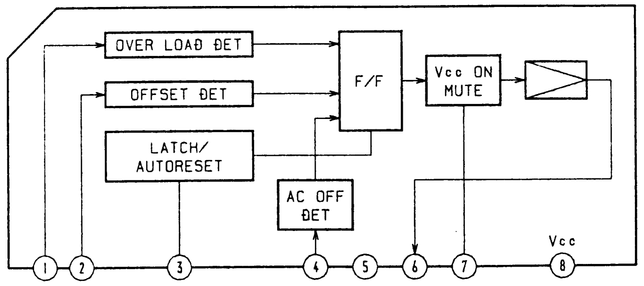
IC1101 M62423FP


DGND
AVSS
SUR C
SUR R
NC
MIC IN
IN2
INBASS2
NFBASS2
FBASS2
INMID2
NFMID2
FMID2
FTRE2
REC OUT2
FBB2
NC
NFBB2
INBB2
OUT2
AVDD
SURROUND SW
VOCAL CUT SW
BASS BOOST SW
MUTE SW
MICON INTERFACE
CLK
DATA
LATCH
DVDD
NC
VCUT
IN1
INBASS1
NFBASS1
FBASS1
INMID1
NFMID1
FMID1
FTRE1
REC OUT1
FBB1
NC
NFBB1
INBB1
OUT1
AGND

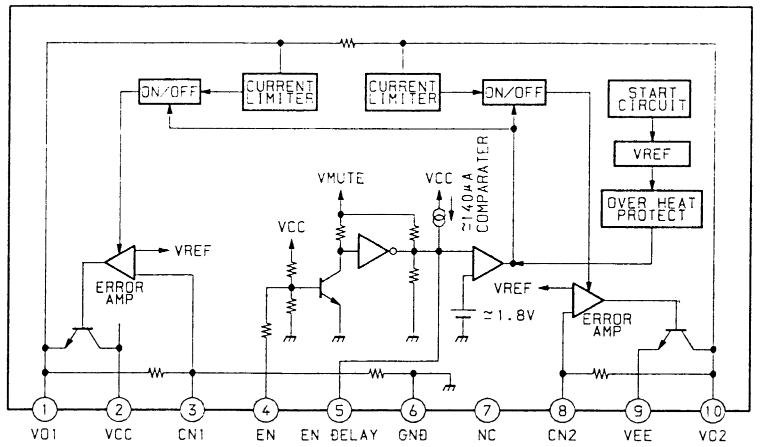
IC1131 TC9210P


VSS
OUT
L-CH
IN
A-GND
NC
CS1
GND
CK
VDD
OUT
IN
R-CH
A-GND
NC
CS2
STB
DATA
L-CH DATA LATCH CIRCUIT
R-CH DATA LATCH CIRCUIT
LEVEL SHIFT CIRCUIT
SHIFT RESISTER (13bit)
STROBE OSC CIRCUIT
LEVEL SHIFT CIRCUIT

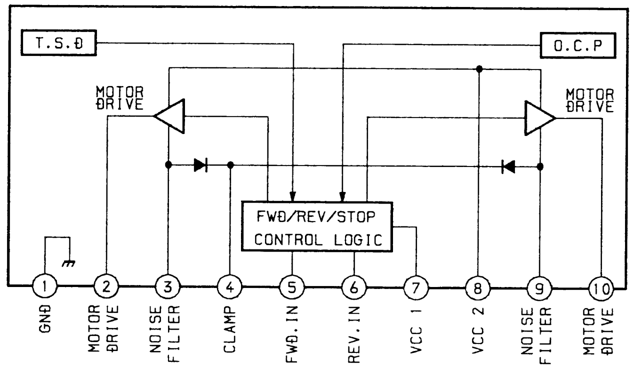
IC1202 μPC1237HA


OVER LOAD DET
OFFSET DET
LATCH/ AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc

IC1351 LA5618


ON/OFF
CURRENT LIMITER
CURRENT LIMITER
ON/OFF
START CIRCUIT
VREF
OVER HEAT PROTECT
VMUTE
VCC
VCC
≈140μA
COMPARATER
VREF
ERROR AMP
VREF
≈1.8V
ERROR AMP
VO1
VCC
CN1
EN
EN DELAY
GND
NC
CN2
VEE
VO2

IC1901 LB1641


T.S.D
O.C.P
MOTOR DRIVE
MOTOR DRIVE
FWD/REV/STOP CONTROL LOGIC
GND
MOTOR DRIVE
NOISE FILTER
CLAMP
FWD.IN
REV.IN
VCC 1
VCC 2
NOISE FILTER
MOTOR DRIVE

6-25. IC PIN FUNCTIONS — MAIN SECTION —

- **IC1051 MASTER CONTROL (TMP87CP64F-6254)**

Pin No.	Pin Name	I/O	Function
1	Vss	I/O	GND
2	XOUT	–	X'tal (8MHz).
3	XIN	I	
4	$\overline{\text{RESET}}$	I	Reset signal input.
5	XOUT	O	X'tal for clock (32.768kHz)
6	XIN	I	
7	GND (test)	–	GND
8	$\overline{\text{BACK UP}}$	I	Back up signal input.
9	$\overline{\text{COUNT SW}}$	I	Not used.
10	$\overline{\text{INIT SW}}$	I	
11	$\overline{\text{DISC SENS}}$	I	
12	$\overline{\text{MID SENS}}$	I	
13	$\overline{\text{CD XRST}}$	O	Reset signal output for CD.
14	$\overline{\text{POWER ON}}$	O	Power on signal output.
15	$\overline{\text{MUTE}}$ (TA)	O	Mute signal for AMP.
16	MPX ON	O	Control signal output for MPX. (N300K)
17	KEY CON LATCH	O	Latch signal for KEY CON. (N300K)
18	VOL LATCH	O	Latch signal for electrical volume.
19	K-CON	O	Control siganl output for KEY CON. (N300K)
20	K-PON B	O	Control signal output for KARAOKE PON. (N300K)
21	FUNC A	O	Input selector control signal output.
22	FUNC B	O	
23	FUNC C	O	
24	GEQ. LATCH	O	Latch signal for graphic equalizer
25	$\overline{\text{RDS INT}}$	I	Not used. (Pull up)
26	SCOR	I	Sub-code sync signal input.
27	SENS	I	Table sence signal input.
28	CD POWER	O	CD power control signal output.
29	CD. G-LATCH	O	Not used.
30	DBFB1-2	O	DBFB switching signal output.
31	ST-MUT	O	Mute signal output for tuner.
32	ST-CE	O	Latch signal output for tuner.
33	$\overline{\text{STEREO}}$	I	Stereo detection signal from tuner.
34	$\overline{\text{TUNED}}$	I	Tuned detection signal from tuner.
35	SQ (RDS) CLK	O	Clock output for sub-Q.
36	SQ (RDS) DI	I	Sub-Q input.
37	RDS RESET	O	Not used.
38	CLK	O	Clock output. Serial bus line.
39	D IN	I	Data input. Serial bus line.
40	D OUT	O	Data output. Serial bus line.
41	$\overline{\text{TABLE SENS}}$	I	Sense signal input.
42	REQ GM	I	Request signal from graphic control.
43	REQ MG	O	Request signal to graphic control.
44	CLK MG	O	Clock signal to graphic control.
45	DI GM	I	Data input from graphic control.
46	DO MG	O	Data output to graphic control.
47	MC RDY	I/O	RDY signal from/to graphic control.
48	VAREF	I	Analog reference voltage input.
49	VAss	–	GND
50	Vss	–	
51	VDD	–	+5V
52	UNGENT. SIG	I	Not used. (Pull up)
53	URGENT. STBY	O	Not used.
54–57	SUBKEY4–1	I	Test land.
58, 59	DEST2, 1	I	Not used.
60, 61	PWM1, 2	I	
62	B-PLAY	I	Control signal input from deck.
63	B-SHUT	I	
64	B-HALF	I	
65	A-SHUT	I	
66	A-PLAY	I	
67	A-HALF	I	
68	CAP M H/L	O	Control signal output for capstan motor.
69	CAP M ON/OFF	O	
70	TRIG H/L	O	Control signal output for trigger motor.
71	B TRIG	O	
72	A TRIG	O	
73	RELAY REC/$\overline{\text{PB}}$	O	Control signal output for deck.
74	PB $\overline{\text{A}}$/B	O	
75	EQ $\overline{\text{NORM}}$/HIGH	O	
76	BIAS ON $\overline{\text{OFF}}$	O	
77	RM $\overline{\text{ON}}$/OFF	O	
78	REC/$\overline{\text{PB}}$	O	
79	NR ON/OFF	O	
80	LM $\overline{\text{ON}}$/OFF	O	Mute signal output for deck.
81	PASS	O	Dolby switching signal output.
82	CDG MUTE	O	Not used.
83	UP MOTOR	O	
84	DOWN MOTOR	O	
85	TABLE R (5CD)	O	

Pin No.	Pin Name	I/O	Function
86	TABLE L (5CD)	O	Not used.
87	LOAD OUT	O	Loading motor control signal output.
88	LOAD IN	O	
89	DF LATCH	O	Latch signal for digital filter.
90	XLT	O	Latch signal digital signal processor.
91	FOCUS SW	O	Focus switching signal output,.
92	$\overline{\text{DUB HI}}$	I	Hi speed dubbing signal input.
93	TEST-1	I	Test land.
94	$\overline{\text{OUT SW}}$	I	Out switch signal input.
95	$\overline{\text{IN SW}}$	I	Down switch signal input.
96	$\overline{\text{UP SW}}$ (5CD)	I	Up switch signal input.
97	$\overline{\text{PANEL SW}}$ (MAGK)	I	Not used.
98	$\overline{\text{CLOSE SW}}$	I	
99	$\overline{\text{OPEN SW}}$	I	
100	VDD	–	+5V

SECTION 7
EXPLODED VIEWS

NOTE:

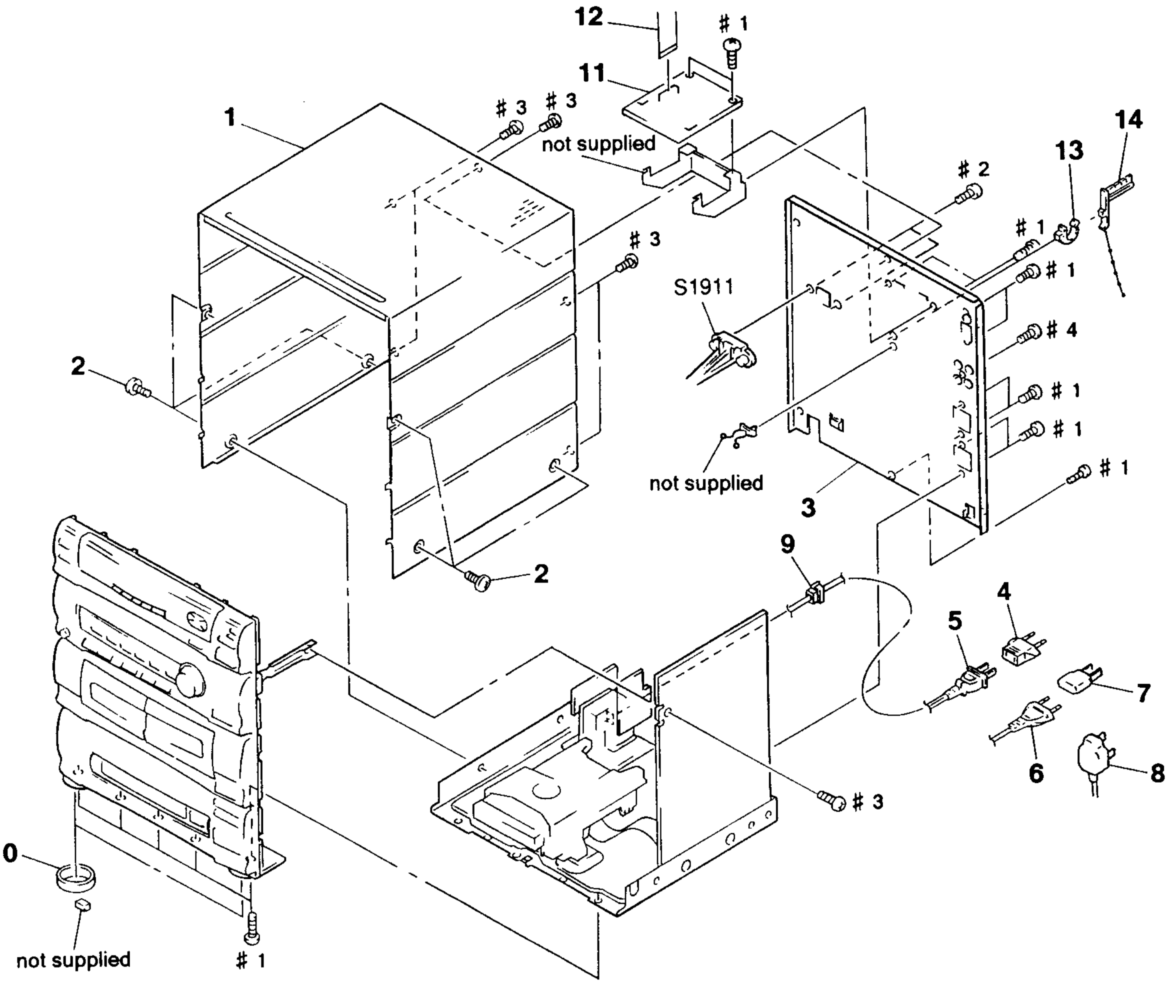
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation

G : German model
IT : Italian model
EE : East European model
EA : Saudi Arabia model
SP : Singapore model
MY : Malaysia model
AEP1 : AEP model without power source for PS-LX56P
AEP2 : AEP model with power source for PS-LX56P

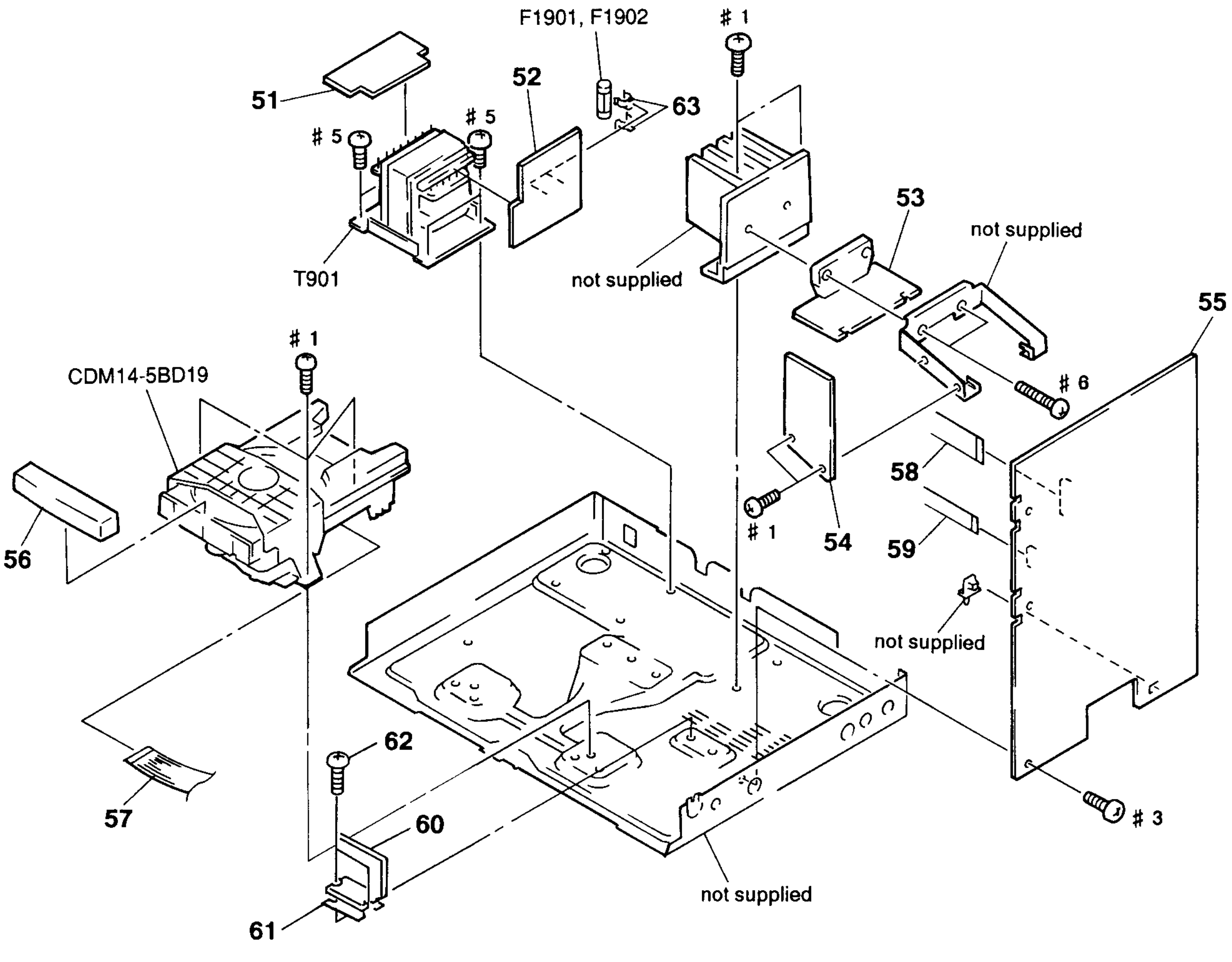
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
1	4-962-725-51	CASE	
2	3-363-099-01	SCREW (CASE 3 TP2)	
* 3	4-969-783-11	PANEL, BACK (N300:AEP2)	
* 3	4-969-783-21	PANEL, BACK (made in Malaysia)(N300:AEP1)	
* 3	4-969-783-31	PANEL, BACK (made in Indonesia)(N300:AEP1)	
* 3	4-969-783-41	PANEL, BACK (N300:G)	
* 3	4-969-783-51	PANEL, BACK (N300:IT)	
* 3	4-969-783-61	PANEL, BACK (N300:EE)	
* 3	4-969-783-71	PANEL, BACK (N300:CIS)	
* 3	4-969-783-81	PANEL, BACK (N300:UK)	
* 3	4-970-162-01	PANEL, BACK (N300K:EA)	
* 3	4-970-162-11	PANEL, BACK (N300K:E)	
* 3	4-970-162-21	PANEL, BACK (N300K:MY)	
* 3	4-970-162-31	PANEL, BACK (N300K:SP)	
⚠4	1-569-007-11	ADAPTER, CONVERSION 2P (N300K:E)	
⚠5	1-558-943-51	CORD, POWER (N300K:E)	
⚠6	1-575-651-21	CORD, POWER (N300:AEP, G, IT, EE, CIS/N300K:EA, MY, SP)	
⚠7	1-569-008-11	ADAPTER, CONVERSION 2P (N300K:EA, MY, SP)	
⚠8	1-751-529-11	CORD, POWER (N300:UK)	
9	3-703-244-00	BUSHING (FBS001), CORD (N300/N300K:EA, MY, SP)	
9	4-966-266-01	BUSHING (S)(FBS002), CORD (N300K:E)	
10	4-921-918-11	PLATE, ORNAMENTAL	
* 11	A-4377-151-A	KEY-CON BOARD, COMPLETE (N300K)	
* 11	A-4377-602-A	POLAR BOARD, COMPLETE (N300:CIS)	
12	1-690-113-11	WIRE, FLAT TYPE (15 CORE)(N300K)	
12	1-690-590-31	WIRE (FLAT TYPE)(13 CORE)(N300:CIS)	
* 13	4-949-235-11	HOOK (N300:AEP, G, IT, EE, CIS/N300K)	
14	4-956-370-12	BAND, PLUG FIXED (N300:UK)	
⚠S1911	1-570-046-21	SWITCH, VOLTAGE CHANGE (N300K:E, EA, SP)	

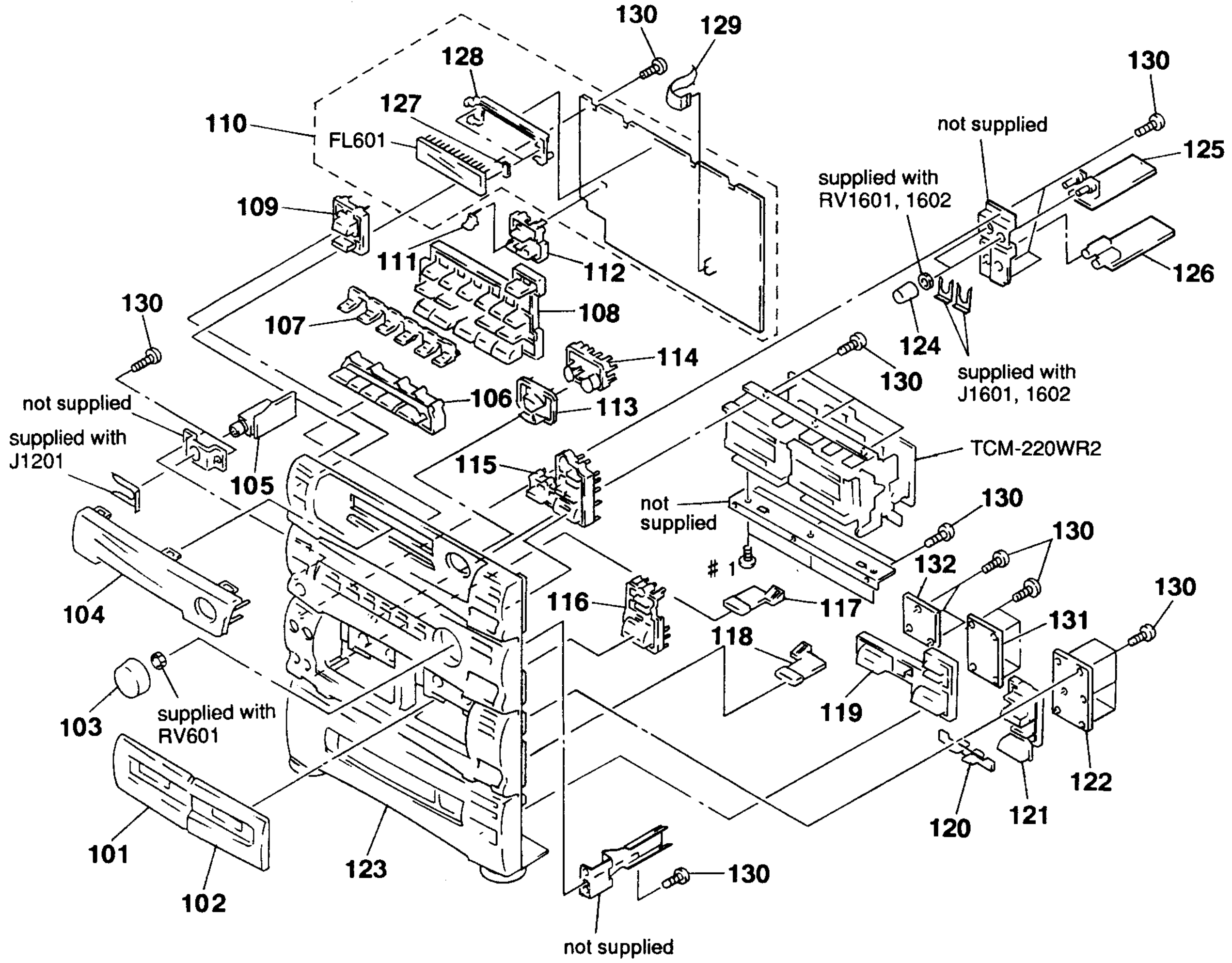
7-2. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 51	1-654-694-11	POWER PRIMARY BOARD	
* 52	1-654-654-11	POWER BOARD	
* 53	A-4377-137-A	POWER AMP BOARD, COMPLETE (N300:AEP, UK, G, IT)	
* 53	A-4377-147-A	POWER AMP BOARD, COMPLETE (N300K)	
* 53	A-4377-606-A	POWER AMP BOARD, COMPLETE (N300:EE, CIS)	
* 54	1-656-668-11	DBFB BOARD (N300K)	
* 55	A-4377-116-A	MAIN BOARD, COMPLETE (N300:UK, AEP2)	
* 55	A-4377-140-A	MAIN BOARD, COMPLETE (N300K:E, SP, MY)	
* 55	A-4377-461-A	MAIN BOARD, COMPLETE (N300:AEP1)	
* 55	A-4377-599-A	MAIN BOARD, COMPLETE (N300:CIS)	
* 55	A-4377-607-A	MAIN BOARD, COMPLETE (N300:EE)	
* 55	A-4377-630-A	MAIN BOARD, COMPLETE (N300:G)	
* 55	A-4377-632-A	MAIN BOARD, COMPLETE (N300:IT)	
* 55	A-4377-635-A	MAIN BOARD, COMPLETE (N300K:EA)	
56	4-969-689-01	PANEL, LOADING	
57	1-769-304-11	WIRE (FLAT TYPE)(19 CORE)	
58	1-751-590-11	WIRE (FLAT TYPE)(21 CORE)	
59	1-590-459-11	WIRE, FLAT TYPE (11 CORE)	
* 60	1-654-656-11	REGULATOR BOARD	
* 61	3-895-841-21	SPACER (IC)	
62	2-383-566-00	SCREW	
63	1-533-217-31	HOLDER, FUSE	
⚠F1901	1-532-350-00	FUSE, TIME LAG (T4AL)	
⚠F1902	1-532-350-00	FUSE, TIME LAG (T4AL)	
⚠T901	1-427-706-11	TRANSFORMER, POWER (N300K)	
⚠T901	1-427-707-11	TRANSFORMER, POWER (N300)	

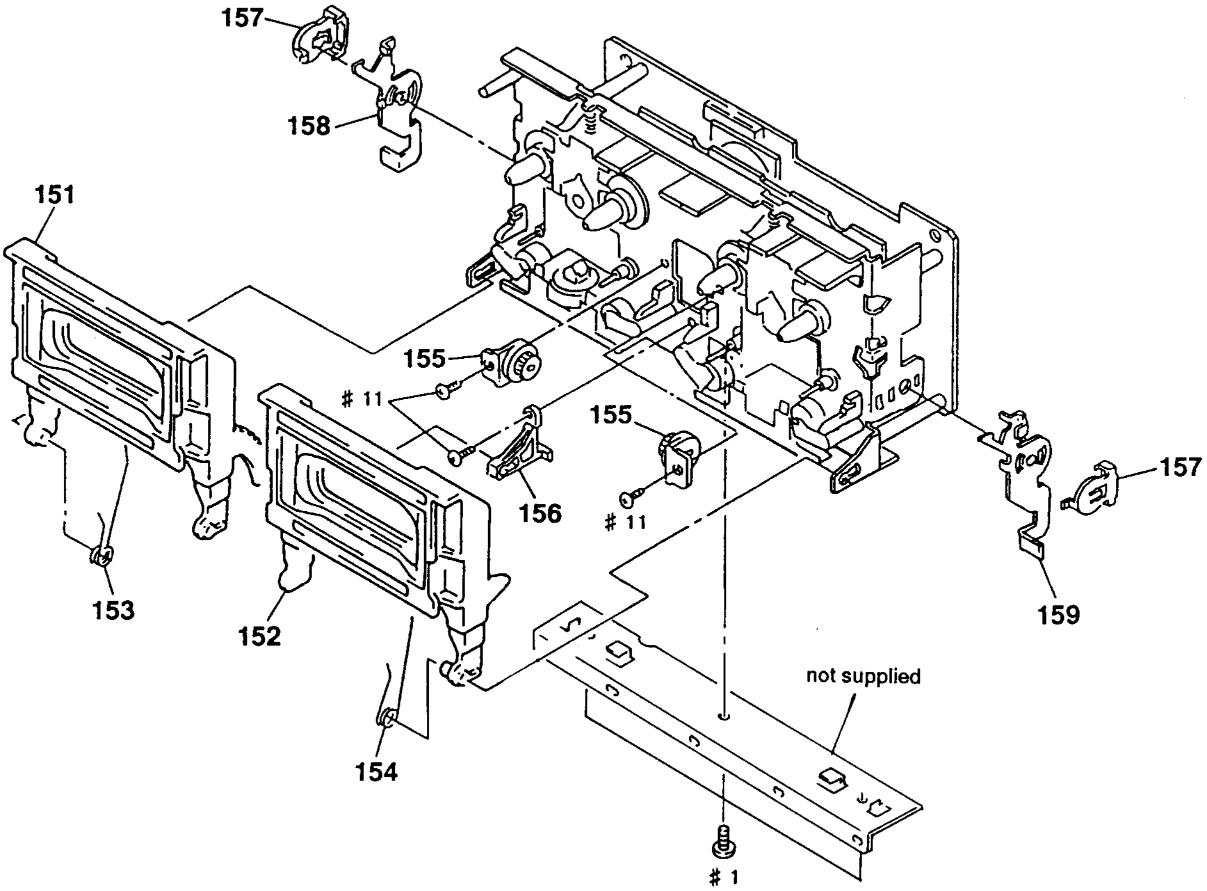
7-3. FRONT PANEL SECTION



130
129
128
127
110
FL601
130
not supplied
125
supplied with
RV1601, 1602
126
109
111
112
108
107
130
124
130
supplied with
J1601, 1602
114
106
113
not supplied
supplied with
J1201
105
115
TCM-220WR2
not
supplied
130
130
# 1
132
104
116
117
130
118
131
119
103
supplied with
RV601
122
120
121
101
123
102
130
not supplied

Ref. No.	Part No.	Description	Remark
101	X-4945-503-1	LID (A) ASSY, CASSETTE	
102	X-4945-504-1	LID (B) ASSY, CASSETTE	
103	4-969-683-01	KNOB (V)	
104	4-969-694-01	DISPLAY (ST)	
* 105	1-654-647-11	H.P. BOARD	
106	4-969-695-01	BUTTON (TIMER)	
107	4-969-698-01	INDICATOR (TA)	
108	X-4945-490-1	BUTTON (PLAY) ASSY	
109	4-969-693-01	BUTTON (POWER)	
* 110	A-4377-127-A	PANEL BOARD, COMPLETE (N300:AEP,UK,G,IT)	
* 110	A-4377-144-A	PANEL BOARD, COMPLETE (N300K)	
* 110	A-4377-603-A	PANEL BOARD, COMPLETE (N300:EE,CIS)	
111	4-970-713-01	INDICATOR (KARAOKE)(N300K)	
112	4-969-676-01	BUTTON (KARAOKE)(N300K)	
113	4-969-666-01	BUTTON (CURSOR 1)	
114	4-969-667-01	BUTTON (CURSOR 2)	
115	X-4945-530-1	BUTTON (ST) ASSY	
116	4-969-669-31	BUTTON (TA)	
117	4-969-706-01	BUTTON (EJECT-L)	
118	4-969-707-01	BUTTON (EJECT-R)	
119	X-4945-492-1	BUTTON (CD) ASSY	
120	4-969-705-01	INDICATOR (TC)	
121	X-4945-491-1	BUTTON (TC) ASSY	
* 122	1-654-650-11	TC PANEL BOARD	
123	4-969-657-01	PANEL, FRONT (N300)	
123	4-969-657-21	PANEL, FRONT (N300K)	
124	4-955-744-01	KNOB (BA)(N300K)	
* 125	A-4377-149-A	ECHO BOARD, COMPLETE (N300K)	
* 126	1-654-620-11	MIC BOARD (N350K)	
* 127	4-949-935-21	CUSHION (FL)	
* 128	4-969-681-01	HOLDER, FL TUBE	
129	1-575-906-31	WIRE, FLAT TYPE (15 CORE)	
130	4-951-620-01	SCREW (2.6X8), +BVTP	
* 131	1-654-649-11	CD PANEL BOARD	
* 132	1-654-648-11	OPEN/CLOSE BOARD	
FL601	1-517-341-11	INDICATOR TUBE, FLUORESCENT	

7-4. TC MECHANISM SECTION 1
(TCM-220 WR2)



157
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# 11
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# 11
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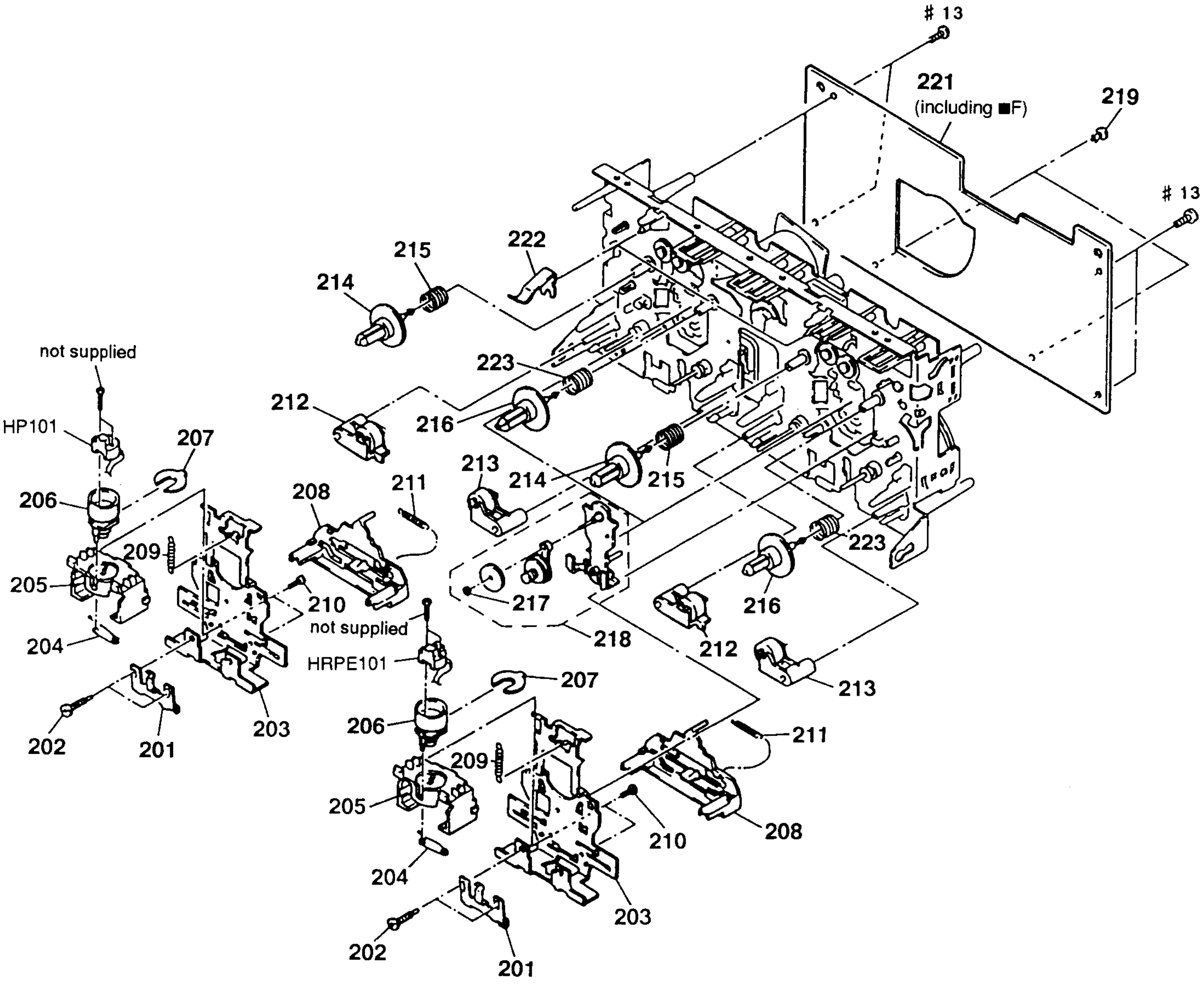
159
not supplied
154
# 1

Ref. No.	Part No.	Description	Remark
151	X-4943-776-1	HOLDER (L) ASSY, CASSETTE	
152	X-4943-775-1	HOLDER (R) ASSY, CASSETTE	
153	4-959-231-11	SPRING (L), TORSION	
154	4-959-232-11	SPRING (R), TORSION	
155	3-354-963-01	DAMPER	

Ref. No.	Part No.	Description	Remark
* 156	3-908-611-01	FULCRUM, HOLDER	
157	3-354-957-01	JOINT (LOCK LEVER)	
* 158	3-354-953-01	LEVER (LOCK LEVER L)	
* 159	3-354-954-01	LEVER (LOCK LEVER R)	

7-5. TC MECHANISM SECTION 2
(TCM-220 WR2)



# 13
221
(including ■F)
219
# 13
215
222
214
not supplied
223
HP101
212
216
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206
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204
not supplied
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HRPE101
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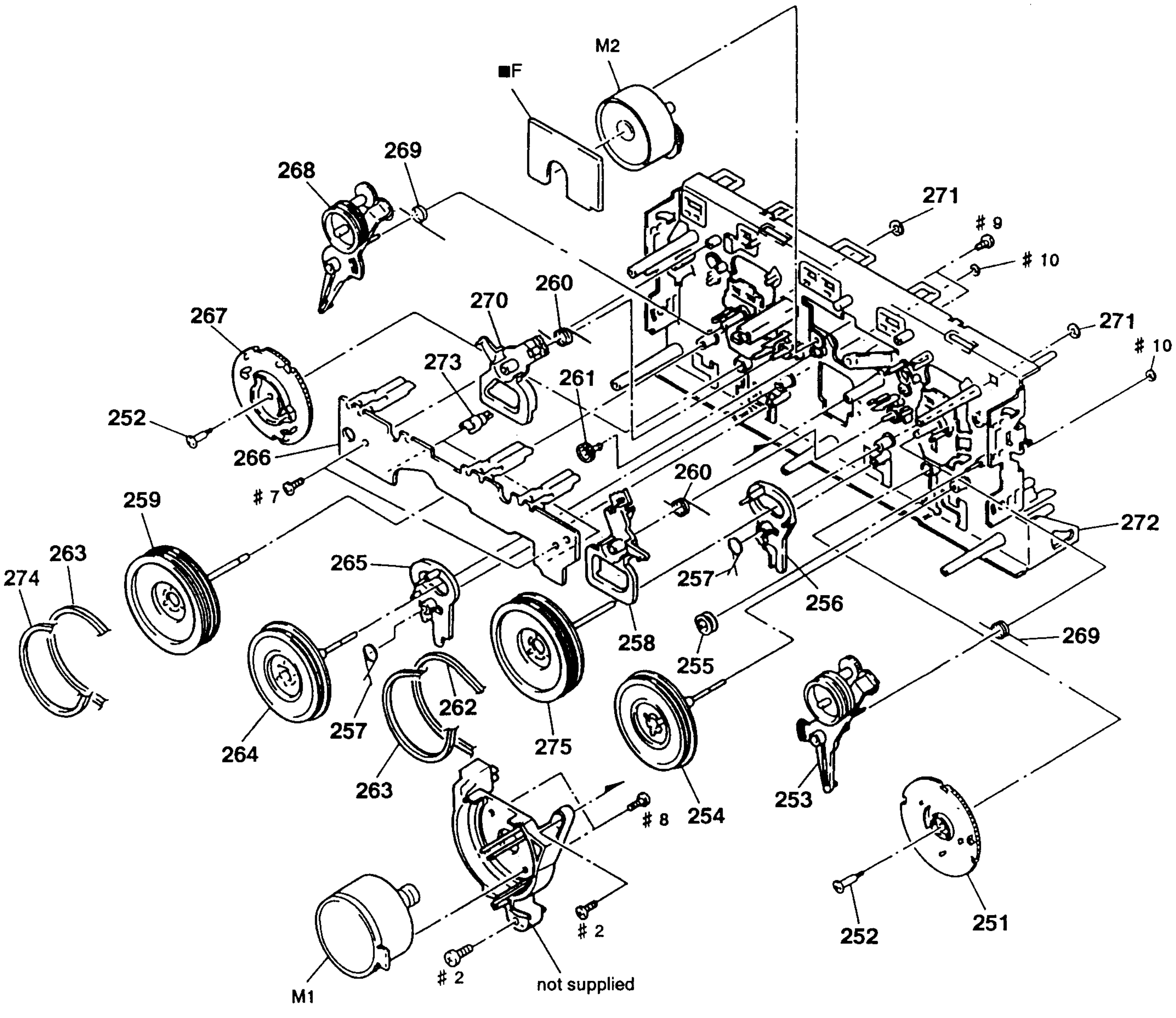
201

Ref. No.	Part No.	Description	Remark
201	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
202	3-919-684-01	SCREW, AZIMUTH ADJUSTMENT	
* 203	X-3367-584-2	SLIDER (HEAD) ASSY	
204	3-908-556-01	SPRING, HEAD TOGGLE	
205	3-908-558-02	FITTING BLOCK, HEAD	
206	3-908-557-02	ROTARY BLOCK, HEAD	
* 207	3-908-559-01	STOPPER, AZIMUTH	
208	3-908-555-01	SLIDER (REV SLIDER)	
209	3-917-143-01	SPRING, TENSION	
210	3-388-848-01	SCREW (P2X6)(B TIGHT)	
211	3-911-113-01	SPRING, TENSION	
212	X-3367-589-1	PINCH LEVER (REV) ASSY	
213	X-3367-588-1	PINCH LEVER (FWD) ASSY	
214	3-908-613-01	GEAR (S), REEL	
215	3-917-141-01	SPRING, COMPRESSION	
216	X-3367-594-1	REEL (T) ASSY	
217	3-669-465-01	WASHER (1.5), STOPPER	
218	X-3370-173-1	TU ASSY	
219	3-911-116-21	RIVET, PUSH	
* 221	A-2007-131-A	MD BOARD, COMPLETE	
222	3-915-490-01	DETENT, HALF	
223	3-917-142-01	SPRING, COMPRESSION	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	

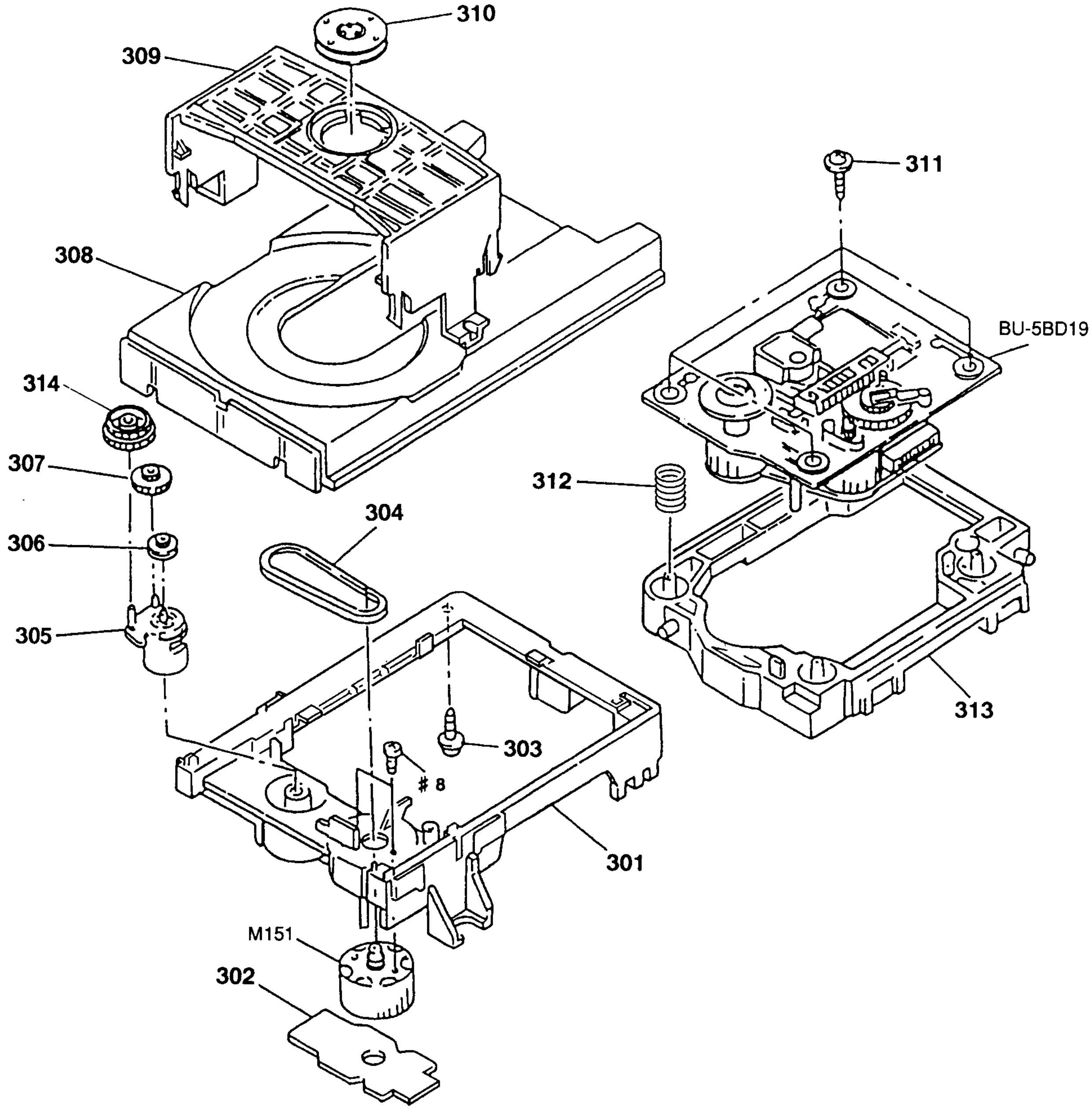
7-6. TC MECHANISM SECTION 3
(TCM-220 WR2)

■ F: MOTOR board


M2
■F
269
268
271
# 9
# 10
260
270
267
271
# 10
273
261
252
266
260
# 7
259
272
263
274
265
257
256
258
269
255
262
257
264
275
263
# 8
254
253
# 2
252
251
# 2
M1
not supplied

Ref. No.	Part No.	Description	Remark
251	3-908-597-01	CAM (A)	
252	3-908-608-01	SCREW, STEP	
253	X-3367-590-2	ARM (A) ASSY, FR	
254	X-3370-169-1	FLYWHEEL (AR) ASSY	
255	3-908-610-01	PULLEY, TENSION	
256	3-908-599-01	LEVER (REV-A)	
257	3-908-601-01	SPRING (REV LEVER), TORSION	
258	3-908-603-01	LEVER (TRIGGER A)	
259	X-3370-170-1	FLYWHEEL (BF) ASSY	
260	3-908-605-01	SPRING (TRIGGER), TORSION	
261	3-908-609-01	GEAR, TRIGGER	
262	3-913-845-01	BELT (A)	
263	3-913-846-01	BELT (FR)	
264	X-3370-171-1	FLYWHEEL (BR) ASSY	
265	3-908-600-01	LEVER (REV-B)	
* 266	1-650-669-11	LEAF SWITCH BOARD	
267	3-908-598-01	CAM (B)	
268	X-3367-591-2	ARM (B) ASSY, FR	
269	3-911-114-01	SPRING (FR), TORSION	
270	3-908-604-01	LEVER (TRIGGER B)	
271	3-911-115-01	WASHER, STOPPER	
272	X-3367-587-1	CHASSIS ASSY, MECHANICAL	
* 273	3-381-776-01	HOLDER (LED)	
274	3-917-176-01	BELT (B)	
275	X-3370-172-1	FLYWHEEL (AF) ASSY	
M1	X-3369-110-1	MOTOR ASSY (CAPSTAN)	
M2	X-3369-111-1	MOTOR ASSY (TRIGGER)	

7-7. CD MECHANISM SECTION
(CDM14-5BD19)


310
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311
308
BU-5BD19
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307
312
304
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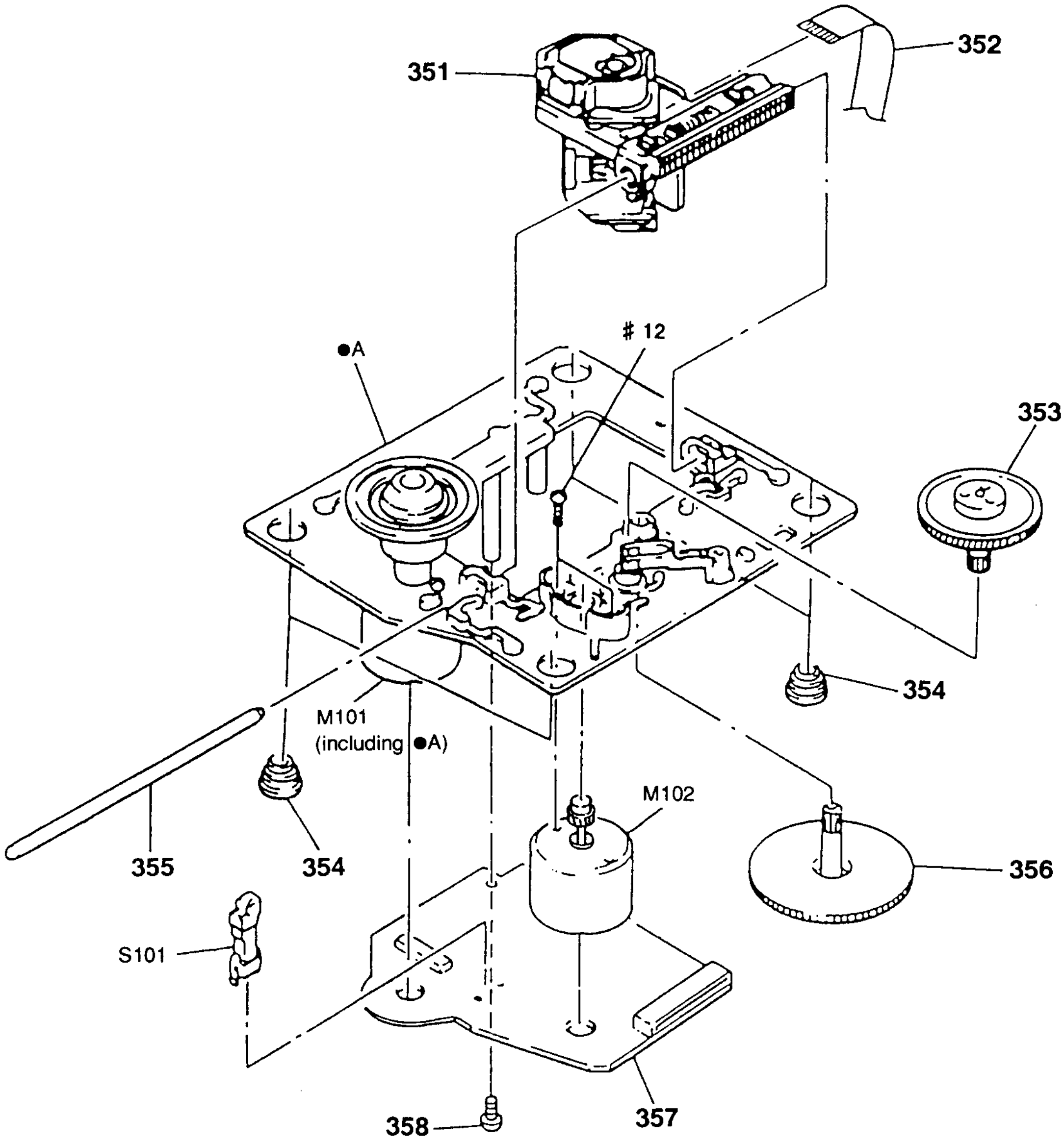
303
# 8
301
M151
302

Ref. No.	Part No.	Description	Remark
301	4-933-111-01	CHASSIS (MD)	
302	1-645-721-11	LOADING BOARD	
303	4-917-583-21	BRACKET, YOKE	
304	4-927-649-01	BELT	
305	4-933-109-01	CAM	
306	4-927-651-01	PULLEY (S)	
307	4-967-268-01	GEAR (C)	
308	4-933-112-01	TABLE, DISK	
309	4-933-110-01	HOLDER (MG)	
310	1-452-538-11	MAGNET	
311	4-933-134-01	SCREW (+PTPWH M2.6X6)	
312	4-959-996-01	SPRING (932), COMPRESSION	
313	4-933-129-01	HOLDER (BU)	
314	4-933-107-12	GEAR (PL)	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	

7-8. BASE UNIT SECTION
(BU-5BD19)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
⚠351	8-848-387-01	OPTICAL PICK-UP BLOCK (KSS-213BA/S-N)	
352	1-769-069-11	WIRE (FLAT TYPE)(16 CORE)	
353	4-917-567-21	GEAR (M)	
354	4-951-940-01	INSULATOR (BU)	
355	4-917-565-01	SHAFT, SLED	
356	4-917-564-01	GEAR (P), FLATNESS	

Ref. No.	Part No.	Description	Remark
* 357	A-4673-402-A	BD BOARD, COMPLETE	
358	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

BD

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB...,
  uPC...: μPC..., uPD...: μPD...

- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation

G	: German model
IT	: Italian model
EE	: East European model
EA	: Saudi Arabia model
SP	: Singapore model
MY	: Malaysia model
AEP1	: AEP model without power source for PS-LX56P
AEP2	: AEP model with power source for PS-LX56P

Ref. No.	Part No.	Description			Remark
*	A-4673-402-A	BD BOARD, COMPLETE			
		******************			
		< CAPACITOR >			
C101	1-126-607-11	ELECT CHIP	47uF	20%	4V
C102	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C106	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C107	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C108	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C109	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C114	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C117	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C118	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C119	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C120	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C121	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C122	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C123	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C124	1-126-607-11	ELECT CHIP	47uF	20%	4V
C125	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C126	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C127	1-164-695-11	CERAMIC CHIP	0.0022uF	5%	50V
C128	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C129	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C130	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C131	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C132	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C133	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C134	1-164-346-11	CERAMIC CHIP	1uF		16V
C135	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C136	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C137	1-164-232-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C139	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C140	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C142	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C145	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C146	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C147	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C148	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C149	1-164-346-11	CERAMIC CHIP	1uF		16V
C153	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C154	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P			
CNU102	1-770-013-11	CONNECTOR, FFC/FPC 19P			
		< IC >			
IC101	8-752-069-56	IC	CXA1782BQ		
IC102	8-759-291-06	IC	BA6397FP-T1		
IC103	8-752-372-94	IC	CXD2507AQ		
IC104	8-759-185-29	IC	PCM1710U-BT1		
		< MOTOR >			
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-RT1		
Q102	8-729-424-08	TRANSISTOR	UN2111		
Q103	8-729-421-22	TRANSISTOR	UN2211		
		< RESISTOR >			
R102	1-216-001-00	METAL CHIP	10	5%	1/10W
R103	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R104	1-216-097-00	METAL CHIP	100K	5%	1/10W
R105	1-216-089-00	METAL CHIP	47K	5%	1/10W
R106	1-216-089-00	METAL CHIP	47K	5%	1/10W
R107	1-216-089-00	METAL CHIP	47K	5%	1/10W
R108	1-216-089-00	METAL CHIP	47K	5%	1/10W
R109	1-216-097-00	METAL CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description				Remark
R112	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R114	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R115	1-216-101-00	METAL CHIP	150K	5%	1/10W	
R116	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R117	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R118	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R119	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R120	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R121	1-216-114-00	METAL GLAZE	510K	5%	1/10W	
R122	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R123	1-216-099-00	METAL CHIP	120K	5%	1/10W	
R124	1-216-091-00	METAL CHIP	56K	5%	1/10W	
R125	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R126	1-216-063-00	METAL CHIP	3.9K	5%	1/10W	
R127	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R128	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R129	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R130	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R131	1-216-079-00	METAL CHIP	18K	5%	1/10W	
R132	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R133	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R134	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R135	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R137	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R138	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R139	1-216-033-00	METAL CHIP	220	5%	1/10W	
R140	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R141	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R142	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R143	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R144	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R145	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R146	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R147	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R148	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R149	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R150	1-216-037-00	METAL CHIP	330	5%	1/10W	
R151	1-216-037-00	METAL CHIP	330	5%	1/10W	
R152	1-216-037-00	METAL CHIP	330	5%	1/10W	
R153	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R154	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R157	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
R158	1-216-001-00	METAL CHIP	10	5%	1/10W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV101	1-241-396-11	RES, ADJ, METAL GLAZE 22K	
RV102	1-241-396-11	RES, ADJ, METAL GLAZE 22K	
RV103	1-241-396-11	RES, ADJ, METAL GLAZE 22K	

< SWITCH >

Ref. No.	Part No.	Description	Remark
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X101	1-579-280-11	VIBRATOR, CRYSTAL (16.9344MHz)	

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* 1-654-649-11 CD PANEL BOARD

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< DIODE >

Ref. No.	Part No.	Description		Remark
D615	8-719-046-42	DIODE	SEL5421E-TH8F	(N300)
D615	8-719-052-22	DIODE	SEL58420C-TP	(N300K)
D616	8-719-046-42	DIODE	SEL5421E-TH8F	(N300)
D616	8-719-052-22	DIODE	SEL58420C-TP	(N300K)

< TRANSISTOR >

Ref. No.	Part No.	Description		Remark
Q605	8-729-900-63	TRANSISTOR	DTA124ES	
Q606	8-729-119-78	TRANSISTOR	2SC2785-HFE	(N300K)

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R642	1-249-411-11	CARBON	330	5%	1/4W	
R643	1-249-413-11	CARBON	470	5%	1/4W	F
R644	1-249-414-11	CARBON	560	5%	1/4W	F
R645	1-249-416-11	CARBON	820	5%	1/4W	F
R677	1-249-429-11	CARBON	10K	5%	1/4W	(N300K)
R678	1-249-410-11	CARBON	270	5%	1/4W	F
R679	1-249-410-11	CARBON	270	5%	1/4W	F (N300K)
R680	1-249-410-11	CARBON	270	5%	1/4W	F
R681	1-249-410-11	CARBON	270	5%	1/4W	F (N300K)

< SWITCH >

Ref. No.	Part No.	Description	Remark
S634	1-554-303-21	SWITCH, TACTILE (CD)	
S635	1-554-303-21	SWITCH, TACTILE (PLAY MODE)	
S636	1-554-303-21	SWITCH, TACTILE (REPEAT)	

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* 1-656-668-11 DBFB BOARD (N300K)

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< CAPACITOR >

Ref. No.	Part No.	Description				Remark
C2101	1-124-925-11	ELECT	2.2uF	20%	100V	
C2102	1-136-165-00	FILM	0.1uF	5%	50V	
C2103	1-136-165-00	FILM	0.1uF	5%	50V	
C2131	1-126-101-11	ELECT	100uF	20%	16V	
C2132	1-126-101-11	ELECT	100uF	20%	16V	
C2133	1-124-902-00	ELECT	0.47uF	20%	50V	

Ref. No.	Part No.	Description	Remark
C2151	1-124-925-11	ELECT 2.2uF 20% 100V	
C2152	1-136-165-00	FILM 0.1uF 5% 50V	
C2153	1-136-165-00	FILM 0.1uF 5% 50V	
		< CONNECTOR >	
CN2101	1-564-506-11	PLUG, CONNECTOR 3P	
CN2102	1-564-511-11	PLUG, CONNECTOR 8P	
		< DIODE >	
D2101	8-719-987-63	DIODE 1N4148M	
D2102	8-719-000-78	DIODE UZL-7L2	
D2103	8-719-000-78	DIODE UZL-7L2	
		< IC >	
IC2101	8-759-634-51	IC M5218AP	
		< TRANSISTOR >	
Q2101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q2102	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q2151	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q2152	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< RESISTOR >	
R2101	1-249-437-11	CARBON 47K 5% 1/4W	
R2102	1-247-807-31	CARBON 100 5% 1/4W	
R2103	1-249-429-11	CARBON 10K 5% 1/4W	
R2104	1-247-863-91	CARBON 22K 5% 1/4W	
R2105	1-247-903-00	CARBON 1M 5% 1/4W	
R2106	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R2107	1-247-895-00	CARBON 470K 5% 1/4W	
R2108	1-249-437-11	CARBON 47K 5% 1/4W	
R2131	1-260-105-11	CARBON 3.3K 5% 1/2W	
R2132	1-260-105-11	CARBON 3.3K 5% 1/2W	
R2133	1-249-429-11	CARBON 10K 5% 1/4W	
R2134	1-249-429-11	CARBON 10K 5% 1/4W	
R2135	1-249-411-11	CARBON 330 5% 1/4W	
R2136	1-249-441-11	CARBON 100K 5% 1/4W	
R2137	1-247-903-00	CARBON 1M 5% 1/4W	
R2151	1-249-437-11	CARBON 47K 5% 1/4W	
R2152	1-247-807-31	CARBON 100 5% 1/4W	
R2153	1-249-429-11	CARBON 10K 5% 1/4W	
R2154	1-247-863-91	CARBON 22K 5% 1/4W	
R2155	1-247-903-00	CARBON 1M 5% 1/4W	
R2156	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R2157	1-247-895-00	CARBON 470K 5% 1/4W	
R2158	1-249-437-11	CARBON 47K 5% 1/4W	

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Ref. No.	Part No.	Description	Remark
	A-4377-149-A	ECHO BOARD, COMPLETE (N300K)	
		***************************	
		< CAPACITOR >	
C1601	1-124-925-11	ELECT 2.2uF 20% 100V	
C1602	1-124-443-00	ELECT 100uF 20% 10V	
C1603	1-164-159-11	CERAMIC 0.1uF 50V	
C1604	1-161-494-00	CERAMIC 0.022uF 25V	
C1605	1-124-903-11	ELECT 1uF 20% 50V	
C1606	1-130-475-00	MYLAR 0.0022uF 5% 50V	
C1607	1-162-302-11	CERAMIC 0.0022uF 20% 16V	
C1608	1-130-493-00	MYLAR 0.068uF 5% 50V	
C1609	1-136-165-00	FILM 0.1uF 5% 50V	
C1610	1-136-165-00	FILM 0.1uF 5% 50V	
C1611	1-124-477-11	ELECT 47uF 20% 25V	
C1612	1-130-493-00	MYLAR 0.068uF 5% 50V	
C1613	1-162-305-11	CERAMIC 0.0068uF 20% 16V	
C1614	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C1615	1-124-903-11	ELECT 1uF 20% 50V	
C1616	1-162-302-11	CERAMIC 0.0022uF 20% 16V	
C1617	1-124-903-11	ELECT 1uF 20% 50V	
C1618	1-162-282-31	CERAMIC 100PF 10% 50V	
C1619	1-162-282-31	CERAMIC 100PF 10% 50V	
C1620	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1621	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1645	1-130-483-00	MYLAR 0.01uF 5% 50V	
C1658	1-124-925-11	ELECT 2.2uF 20% 100V	
C1681	1-162-290-31	CERAMIC 470PF 10% 50V	
C1682	1-162-290-31	CERAMIC 470PF 10% 50V	
		< DIODE >	
D1601	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC1601	8-759-264-75	IC M65843P	
IC1602	8-759-634-51	IC M5218AP	
		< COIL >	
L1601	1-410-521-11	INDUCTOR 100uH	
		< TRANSISTOR >	
R1601	1-247-903-00	CARBON 1M 5% 1/4W	
R1602	1-249-431-11	CARBON 15K 5% 1/4W	
R1603	1-249-431-11	CARBON 15K 5% 1/4W	
R1604	1-249-431-11	CARBON 15K 5% 1/4W	
R1605	1-249-429-11	CARBON 10K 5% 1/4W	
R1606	1-247-863-91	CARBON 22K 5% 1/4W	
R1607	1-249-431-11	CARBON 15K 5% 1/4W	
R1608	1-249-429-11	CARBON 10K 5% 1/4W	
R1609	1-249-431-11	CARBON 15K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R1611	1-249-398-11	CARBON 27 5% 1/4W	F
R1643	1-249-429-11	CARBON 10K 5% 1/4W	
R1644	1-249-431-11	CARBON 15K 5% 1/4W	
R1645	1-249-437-11	CARBON 47K 5% 1/4W	
R1646	1-249-417-11	CARBON 1K 5% 1/4W	F
R1656	1-249-434-11	CARBON 27K 5% 1/4W	
R1681	1-249-427-11	CARBON 6.8K 5% 1/4W	F

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV1601	1-241-903-11	RES, VAR, CARBON 50K	
RV1602	1-241-903-11	RES, VAR, CARBON 50K	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X1601	1-527-978-00	OSCILLATOR, CERAMIC (320kHz)	

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* 1-654-647-11 H.P BOARD

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< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C1706	1-162-282-31	CERAMIC 100PF 10% 50V	
C1707	1-162-282-31	CERAMIC 100PF 10% 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN1205	1-568-954-11	PIN, CONNECTOR 5P	

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A-4377-151-A KEY CON BOARD, COMPLETE (N300K)

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< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C1401	1-130-491-00	MYLAR 0.047uF 5% 50V	
C1402	1-124-907-11	ELECT 10uF 20% 50V	
C1403	1-124-907-11	ELECT 10uF 20% 50V	
C1404	1-124-907-11	ELECT 10uF 20% 50V	
C1405	1-124-907-11	ELECT 10uF 20% 50V	
C1406	1-124-907-11	ELECT 10uF 20% 50V	
C1431	1-130-493-00	MYLAR 0.068uF 5% 50V	
C1432	1-130-493-00	MYLAR 0.068uF 5% 50V	
C1433	1-130-493-00	MYLAR 0.068uF 5% 50V	
C1434	1-162-211-31	CERAMIC 33PF 5% 50V	
C1435	1-162-211-31	CERAMIC 33PF 5% 50V	
C1436	1-126-803-11	ELECT 47uF 20% 10V	
C1437	1-164-159-11	CERAMIC 0.1uF 50V	
C1438	1-124-443-00	ELECT 100uF 20% 10V	
C1439	1-124-907-11	ELECT 10uF 20% 50V	
C1445	1-136-165-00	FILM 0.1uF 5% 50V	
C1446	1-136-165-00	FILM 0.1uF 5% 50V	
C1447	1-136-165-00	FILM 0.1uF 5% 50V	
C1448	1-124-907-11	ELECT 10uF 20% 50V	
C1461	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1462	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C1466	1-162-600-11	CERAMIC 0.0047uF 20% 16V	
C1467	1-162-291-31	CERAMIC 560PF 10% 50V	
C1468	1-162-290-31	CERAMIC 470PF 10% 50V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN1401	1-568-834-11	SOCKET, CONNECTOR 15P	

< IC >

Ref. No.	Part No.	Description	Remark
IC1401	8-759-634-51	IC M5218AP	
IC1402	8-759-634-51	IC M5218AP	
IC1403	8-759-140-53	IC uPD4053BC	
IC1404	8-759-260-30	IC M65840SP	

< COIL >

Ref. No.	Part No.	Description	Remark
L1401	1-410-521-11	INDUCTOR 100uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q1401	8-729-900-80	TRANSISTOR DTC114ES	
Q1402	8-729-900-80	TRANSISTOR DTC114ES	

< RESISTOR >

Ref. No.	Part No.	Description	Remark
R1401	1-249-441-11	CARBON 100K 5% 1/4W	
R1402	1-249-441-11	CARBON 100K 5% 1/4W	
R1403	1-249-435-11	CARBON 33K 5% 1/4W	
R1404	1-249-435-11	CARBON 33K 5% 1/4W	
R1405	1-249-435-11	CARBON 33K 5% 1/4W	
R1406	1-247-863-91	CARBON 22K 5% 1/4W	
R1407	1-247-863-91	CARBON 22K 5% 1/4W	
R1408	1-247-863-91	CARBON 22K 5% 1/4W	
R1409	1-247-863-91	CARBON 22K 5% 1/4W	
R1410	1-249-429-11	CARBON 10K 5% 1/4W	
R1411	1-247-903-00	CARBON 1M 5% 1/4W	
R1413	1-247-863-91	CARBON 22K 5% 1/4W	
R1414	1-247-863-91	CARBON 22K 5% 1/4W	
R1415	1-249-441-11	CARBON 100K 5% 1/4W	
R1416	1-249-441-11	CARBON 100K 5% 1/4W	
R1417	1-249-429-11	CARBON 10K 5% 1/4W	
R1421	1-249-417-11	CARBON 1K 5% 1/4W	F
R1422	1-249-429-11	CARBON 10K 5% 1/4W	
R1423	1-249-417-11	CARBON 1K 5% 1/4W	F
R1424	1-249-429-11	CARBON 10K 5% 1/4W	
R1431	1-259-884-11	CARBON 4.7M 5% 1/4W	
R1434	1-247-903-00	CARBON 1M 5% 1/4W	
R1435	1-247-807-31	CARBON 100 5% 1/4W	
R1436	1-247-807-31	CARBON 100 5% 1/4W	
R1438	1-247-807-31	CARBON 100 5% 1/4W	

KEY CON | LEAF SWITCH | LOADING | MAIN

Ref.No.	Part No.	Description	Remark
R1448	1-249-429-11	CARBON 10K 5% 1/4W	
R1449	1-249-429-11	CARBON 10K 5% 1/4W	
R1450	1-249-441-11	CARBON 100K 5% 1/4W	
R1451	1-249-429-11	CARBON 10K 5% 1/4W	
R1452	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1453	1-249-429-11	CARBON 10K 5% 1/4W	
R1457	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R1458	1-249-431-11	CARBON 15K 5% 1/4W	
R1459	1-249-429-11	CARBON 10K 5% 1/4W	
R1460	1-247-863-91	CARBON 22K 5% 1/4W	
		< VIBRATOR >	
X1101	1-567-927-11	VIBLATOR, CERAMIC (16MHz)	

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*	1-650-669-11	LEAF SWITCH BOARD *****************	
*	3-381-776-01	HOLDER (LED)	
		< CONNECTOR >	
* CN1001	1-568-854-11	SOCKET, CONNECTOR 11P	
		< TRANSISTOR >	
Q1001	8-719-710-02	TRANSISTOR PHOTO REFLECTOR NJL5165K-A	
Q1002	8-719-710-02	TRANSISTOR PHOTO REFLECTOR NJL5165K-A	
		< RESISTOR >	
R1001	1-249-412-11	CARBON 390 5% 1/4W F	
R1002	1-249-412-11	CARBON 390 5% 1/4W F	
R1003	1-249-414-11	CARBON 560 5% 1/4W F	
R1004	1-247-834-11	CARBON 1.3K 5% 1/4W	
R1005	1-247-818-11	CARBON 300 5% 1/4W	
		< SWITCH >	
S1001	1-692-832-11	SWITCH, PUSH (1 KEY)(A PLAY)	
S1002	1-692-832-11	SWITCH, PUSH (1 KEY)(B PLAY)	
S1003	1-572-248-11	SWITCH, LEAF (A HALF)	
S1004	1-571-281-21	SWITCH, LEAF (A CrO2)	
S1005	1-571-281-21	SWITCH, LEAF (REC A)	
S1006	1-572-248-11	SWITCH, LEAF (B HALF)	
S1008	1-571-281-21	SWITCH, LEAF (B CrO2)	
S1009	1-571-281-21	SWITCH, LEAF (REC B)	

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Ref.No.	Part No.	Description	Remark
	1-645-721-11	LOADING BOARD *************	
		< CONNECTOR >	
* CN151	1-568-943-11	PIN, CONNECTOR 5P	
		< SWITCH >	
S271	1-572-086-11	SWITCH, LEAF (LOAD OUT)	
S272	1-572-086-11	SWITCH, LEAF (LOAD IN)	

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*	A-4377-116-A	MAIN BOARD, COMPLETE (N300:AEP2, UK) **********************************	
*	A-4377-140-A	MAIN BOARD, COMPLETE (N300K:E, SP, MY) ***********************************	
*	A-4377-461-A	MAIN BOARD, COMPLETE (N300:AEP1) *******************************	
*	A-4377-599-A	MAIN BOARD, COMPLETE (N300:CIS) ******************************	
*	A-4377-607-A	MAIN BOARD, COMPLETE (N300:EE) *****************************	
*	A-4377-630-A	MAIN BOARD, COMPLETE (N300:G) ****************************	
*	A-4377-632-A	MAIN BOARD, COMPLETE (N300:IT) *****************************	
*	A-4377-635-A	MAIN BOARD, COMPLETE (N300K:EA) ******************************	
		< CAPACITOR >	
C1	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C2	1-124-477-11	ELECT 47uF 20% 25V (N300:AEP, UK, G, IT)	
C2	1-126-934-11	ELECT 220uF 20% 16V	
C3	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C4	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C5	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C6	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C7	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C8	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C9	1-101-004-00	CERAMIC 0.01uF 50V (N300:EE, CIS/N300K)	
C11	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C12	1-124-477-11	ELECT 47uF 20% 25V (N300:AEP, UK, G, IT)	
C12	1-126-934-11	ELECT 220uF 20% 16V	
C13	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C14	1-162-306-11	CERAMIC 0.01uF 30% 16V	

Ref. No.	Part No.	Description				Remark
C15	1-164-159-11	CERAMIC	0.1uF		50V	
C16	1-124-907-11	ELECT	10uF	20%	50V	
C17	1-124-902-00	ELECT	0.47uF	20%	50V	
C18	1-124-903-11	ELECT	1uF	20%	50V	
C19	1-124-903-11	ELECT	1uF	20%	50V	
C20	1-124-907-11	ELECT	10uF	20%	50V	
C21	1-124-907-11	ELECT	10uF	20%	50V	
C22	1-124-907-11	ELECT	10uF	20%	50V	
C23	1-124-907-11	ELECT	10uF	20%	50V	
C24	1-137-436-11	FILM	0.0039uF	5%	50V	(N300)
C25	1-137-436-11	FILM	0.0039uF	5%	50V	(N300)
C26	1-136-158-00	FILM	0.027uF	5%	50V	(N300:EE, CIS/N300K)
C26	1-136-160-00	FILM	0.039uF	5%	50V	(N300:AEP, UK, G, IT)
C27	1-136-158-00	FILM	0.027uF	5%	50V	(N300:EE, CIS/N300K)
C27	1-136-160-00	FILM	0.039uF	5%	50V	(N300:AEP, UK, G, IT)
C28	1-124-903-11	ELECT	1uF	20%	50V	
C29	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C30	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C31	1-124-477-11	ELECT	47uF	20%	25V	
C32	1-126-962-11	ELECT	3.3uF	20%	50V	
C33	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C34	1-126-933-11	ELECT	100uF	20%	10V	
C35	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C37	1-162-199-31	CERAMIC	10PF	5%	50V	(N300K:EA)
C38	1-162-211-31	CERAMIC	33PF	5%	50V	(N300:AEP, UK, G, IT)
C39	1-162-195-31	CERAMIC	4.7PF	10%	50V	(N300K:EA)
C40	1-101-005-00	CERAMIC	22000PF		50V	
C41	1-164-159-11	CERAMIC	0.1uF		50V	(N300:AEP, UK, EE, CIS/N300K:EA)
C42	1-162-196-31	CERAMIC	5.6PF	10%	50V	(N300:AEP, UK, EE, CIS)
C42	1-162-198-31	CERAMIC	8.2PF	10%	50V	(N300:G, IT/N300K)
C43	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C44	1-102-120-00	CERAMIC	0.0018uF	10%	50V	(N300:AEP, UK, EE, CIS)
C45	1-162-301-11	CERAMIC	0.0015uF	30%	16V	(N300:AEP, UK, EE, CIS)
C46	1-101-005-00	CERAMIC	22000PF		50V	(N300:AEP, UK, EE, CIS)
C46	1-101-006-00	CERAMIC	0.047uF		50V	(N300K:EA)
C47	1-136-162-00	FILM	0.056uF	5%	50V	(N300K:EA)
C48	1-164-159-11	CERAMIC	0.1uF		50V	(N300K:EA)
C49	1-162-306-11	CERAMIC	0.01uF	30%	16V	(N300K:EA)
C51	1-164-031-11	CERAMIC	33PF	5%	50V	
C52	1-164-027-11	CERAMIC	22PF	5%	50V	
C53	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C54	1-124-477-11	ELECT	47uF	20%	25V	
C55	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C56	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C57	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C58	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C61	1-124-925-11	ELECT	2.2uF	20%	100V	
C62	1-164-159-11	CERAMIC	0.1uF		50V	
C63	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C68	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C69	1-126-934-11	ELECT	220uF	20%	16V	
C71	1-136-173-00	FILM	0.47uF	5%	50V	(N300:AEP, UK, EE, CIS)
C72	1-161-494-00	CERAMIC	0.022uF		25V	(N300:AEP, UK, EE, CIS)
C73	1-161-494-00	CERAMIC	0.022uF		25V	(N300:AEP, UK, EE, CIS)
C95	1-124-907-11	ELECT	10uF	20%	50V	(N300:CIS)
C96	1-124-907-11	ELECT	10uF	20%	50V	(N300:CIS)
C701	1-137-368-11	FILM	0.0047uF	5%	50V	
C702	1-162-290-31	CERAMIC	470PF	10%	50V	
C703	1-137-399-11	FILM	0.1uF	5%	50V	(N300)
C705	1-124-903-11	ELECT	1uF	20%	50V	
C706	1-124-902-00	ELECT	0.47uF	20%	50V	
C707	1-124-907-11	ELECT	10uF	20%	50V	
C710	1-124-907-11	ELECT	10uF	20%	50V	
C711	1-124-903-11	ELECT	1uF	20%	50V	
C712	1-124-443-00	ELECT	100uF	20%	10V	
C801	1-137-368-11	FILM	0.0047uF	5%	50V	
C802	1-162-290-31	CERAMIC	470PF	10%	50V	
C803	1-137-399-11	FILM	0.1uF	5%	50V	(N300)
C805	1-124-903-11	ELECT	1uF	20%	50V	
C806	1-124-902-00	ELECT	0.47uF	20%	50V	
C807	1-124-907-11	ELECT	10uF	20%	50V	
C810	1-124-907-11	ELECT	10uF	20%	50V	
C811	1-124-903-11	ELECT	1uF	20%	50V	
C812	1-124-443-00	ELECT	100uF	20%	10V	
C901	1-164-159-11	CERAMIC	0.1uF		50V	
C902	1-164-159-11	CERAMIC	0.1uF		50V	
C903	1-164-159-11	CERAMIC	0.1uF		50V	
C906	1-126-101-11	ELECT	100uF	20%	16V	
C1001	1-162-288-31	CERAMIC	330PF	10%	50V	(N300)
C1003	1-162-282-31	CERAMIC	100PF	10%	50V	
C1004	1-162-282-31	CERAMIC	100PF	10%	50V	
C1005	1-124-927-11	ELECT	4.7uF	20%	100V	

MAIN

Ref. No.	Part No.	Description				Remark
C1006	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C1007	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C1008	1-124-902-00	ELECT	0.47uF	20%	50V	
C1009	1-126-803-11	ELECT	47uF	20%	10V	(N300)
C1010	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1021	1-162-286-21	CERAMIC	220PF	10%	50V	(N300)
C1033	1-124-907-11	ELECT	10uF	20%	50V	
C1034	1-124-907-11	ELECT	10uF	20%	50V	
C1049	1-124-907-11	ELECT	10uF	20%	50V	
C1051	1-162-288-31	CERAMIC	330PF	10%	50V	(N300)
C1053	1-162-282-31	CERAMIC	100PF	10%	50V	
C1054	1-162-282-31	CERAMIC	100PF	10%	50V	
C1055	1-124-927-11	ELECT	4.7uF	20%	100V	
C1056	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C1057	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C1058	1-124-902-00	ELECT	0.47uF	20%	50V	
C1059	1-126-803-11	ELECT	47uF	20%	10V	(N300)
C1060	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1071	1-162-286-21	CERAMIC	220PF	10%	50V	(N300)
C1099	1-124-907-11	ELECT	10uF	20%	50V	
C1101	1-137-440-11	FILM	0.018uF	5%	50V	
C1102	1-124-903-11	ELECT	1uF	20%	50V	
C1103	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C1104	1-137-443-11	FILM	0.056uF	5%	50V	
C1105	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C1106	1-136-171-00	FILM	0.33uF	5%	50V	
C1107	1-136-169-00	FILM	0.22uF	5%	50V	
C1131	1-124-907-11	ELECT	10uF	20%	50V	
C1133	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1136	1-164-159-11	CERAMIC	0.1uF		50V	
C1137	1-164-159-11	CERAMIC	0.1uF		50V	
C1151	1-137-440-11	FILM	0.018uF	5%	50V	
C1152	1-124-903-11	ELECT	1uF	20%	50V	
C1153	1-162-302-11	CERAMIC	0.0022uF	30%	16V	
C1154	1-137-443-11	FILM	0.056uF	5%	50V	
C1155	1-162-600-11	CERAMIC	0.0047uF	30%	16V	
C1156	1-136-171-00	FILM	0.33uF	5%	50V	
C1157	1-136-169-00	FILM	0.22uF	5%	50V	
C1161	1-164-159-11	CERAMIC	0.1uF		50V	
C1181	1-124-907-11	ELECT	10uF	20%	50V	
C1183	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1191	1-124-907-11	ELECT	10uF	20%	50V	
C1221	1-124-443-00	ELECT	100uF	20%	10V	
C1222	1-126-176-11	ELECT	220uF	20%	10V	
C1223	1-126-176-11	ELECT	220uF	20%	10V	
C1224	1-124-925-11	ELECT	2.2uF	20%	100V	
C1248	1-137-375-11	FILM	0.068uF	5%	50V	(N300)
C1249	1-137-375-11	FILM	0.068uF	5%	50V	(N300)
C1250	1-162-294-31	CERAMIC	0.001uF	10%	50V	(N300)
C1298	1-137-375-11	FILM	0.068uF	5%	50V	(N300)

Ref. No.	Part No.	Description				Remark
C1299	1-137-375-11	FILM	0.068uF	5%	50V	(N300)
C1300	1-162-294-31	CERAMIC	0.001uF	10%	50V	(N300)
C1301	1-136-169-00	FILM	0.22uF	5%	50V	
C1302	1-136-169-00	FILM	0.22uF	5%	50V	
C1303	1-126-974-11	ELECT	3300uF	20%	50V	
C1304	1-126-974-11	ELECT	3300uF	20%	50V	
C1305	1-126-105-11	ELECT	1000uF	20%	35V	
C1306	1-124-477-11	ELECT	47uF	20%	25V	
C1307	1-124-477-11	ELECT	47uF	20%	25V	
C1321	1-124-122-11	ELECT	100uF	20%	50V	
C1322	1-124-122-11	ELECT	100uF	20%	50V	
C1326	1-124-907-11	ELECT	10uF	20%	50V	
C1327	1-124-907-11	ELECT	10uF	20%	50V	
C1331	1-136-165-00	FILM	0.1uF	5%	50V	
C1332	1-136-165-00	FILM	0.1uF	5%	50V	
C1333	1-126-946-11	ELECT	6800uF	20%	25V	
C1334	1-124-636-00	ELECT	3300uF	20%	25V	
C1341	1-124-907-11	ELECT	10uF	20%	50V	
C1342	1-124-902-00	ELECT	0.47uF	20%	50V	
C1343	1-124-903-11	ELECT	1uF	20%	50V	
C1344	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1346	1-124-907-11	ELECT	10uF	20%	50V	
C1361	1-126-176-11	ELECT	220uF	20%	10V	
C1362	1-126-176-11	ELECT	220uF	20%	10V	
C1365	1-126-925-11	ELECT	470uF	20%	10V	
C1371	1-124-477-11	ELECT	47uF	20%	25V	(N300:AEP2, UK)
C1375	1-124-907-11	ELECT	10uF	20%	50V	
C1376	1-126-803-11	ELECT	47uF	20%	10V	
C1381	1-124-898-11	ELECT	4700uF	20%	16V	
C1501	1-124-471-00	ELECT	1000uF	20%	6.3V	
C1503	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1504	1-124-477-11	ELECT	47uF	20%	25V	
C1506	1-136-165-00	FILM	0.1uF	5%	50V	
C1507	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1511	1-102-947-00	CERAMIC	10PF	5%	50V	
C1512	1-102-947-00	CERAMIC	10PF	5%	50V	
C1515	1-162-290-31	CERAMIC	470PF	10%	50V	
C1705	1-137-368-11	FILM	0.0047uF	5%	50V	
C1755	1-137-368-11	FILM	0.0047uF	5%	50V	
C1801	1-124-907-11	ELECT	10uF	20%	50V	
C1802	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1803	1-124-925-11	ELECT	2.2uF	20%	100V	
C1901	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1902	1-137-372-11	FILM	0.022uF	5%	50V	

< FILTER >

Ref. No.	Part No.	Description	Remark
CF1	1-567-389-11	FILTER, CERAMIC 10.7MHz	
CF2	1-760-393-11	FILTER, CERAMIC 10.7MHz	(N300:AEP, UK, G, IT)

Ref. No.	Part No.	Description	Remark
CF3	1-567-389-11	FILTER, CERAMIC 10.7MHz	(N300:EE,CIS/N300K)
CF3	1-760-393-11	FILTER, CERAMIC 10.7MHz	(N300:AEP,UK,G,IT)
CF4	1-760-220-11	FILTER, CERAMIC 10.7MHz	
CF5	1-527-981-00	FILTER, CERAMIC 450kHz	
CF6	1-577-075-11	OSCILLATOR, CERAMIC 456kHz	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN1	1-750-418-11	CONNECTOR, FFC/FPC 13P	(N300:CIS)
CN901	1-568-838-11	SOCKET, CONNECTOR 21P	
* CN902	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN903	1-560-061-00	PIN, CONNECTOR 3P	
* CN1003	1-568-955-11	PIN, CONNECTOR 6P	(N300K)
* CN1006	1-568-834-11	SOCKET, CONNECTOR 15P	(N300K)
* CN1301	1-564-512-11	PLUG, CONNECTOR 9P	
* CN1302	1-564-509-11	PLUG, CONNECTOR 6P	
* CN1371	1-566-210-11	PIN, CONNECTOR 3P	(N300:AEP2,UK)
* CN1501	1-568-834-11	SOCKET, CONNECTOR 15P	
CN1701	1-770-067-11	CONNECTOR, FFC/FPC 19P	
* CN1901	1-568-954-11	PIN, CONNECTOR 5P	

< TRIMMER >

Ref. No.	Part No.	Description	Remark
CT1	1-141-227-00	CAP, TRIMMER 20PF	(N300K:EA)
CT2	1-141-227-00	CAP, TRIMMER 20PF	(N300K:EA)

< DIODE >

Ref. No.	Part No.	Description	Remark
D1	8-719-987-63	DIODE 1N4148M	
D2	8-719-987-63	DIODE 1N4148M	(N300:CIS)
D3	8-719-987-63	DIODE 1N4148M	(N300:CIS)
D5	8-719-976-30	DIODE KV1560N	(N300K:EA)
D901	8-719-933-54	DIODE HZS9A2L	
D1204	8-719-987-63	DIODE 1N4148M	
D1205	8-719-987-63	DIODE 1N4148M	
D1303	8-719-028-23	DIODE D3SBA20-4101	
D1306	8-719-001-43	DIODE UZL-11M1-TA	
D1309	8-719-987-63	DIODE 1N4148M	
D1310	8-719-987-63	DIODE 1N4148M	
D1311	8-719-200-82	DIODE 11ES2	
D1321	8-719-200-82	DIODE 11ES2	
D1322	8-719-200-82	DIODE 11ES2	
D1323	8-719-934-18	LED HZS27-2L	
D1331	8-719-200-02	DIODE 10E2	
D1332	8-719-200-02	DIODE 10E2	
D1333	8-719-200-02	DIODE 10E2	
D1334	8-719-200-02	DIODE 10E2	
D1341	8-719-987-63	DIODE 1N4148M	
D1361	8-719-987-63	DIODE 1N4148M	
D1362	8-719-987-63	DIODE 1N4148M	
D1363	8-719-200-82	DIODE 11ES2	
D1364	8-719-200-82	DIODE 11ES2	
D1371	8-719-200-82	DIODE 11ES2	(N300:AEP2,UK)
D1372	8-719-200-82	DIODE 11ES2	(N300:AEP2,UK)
D1373	8-719-200-82	DIODE 11ES2	(N300:AEP2,UK)
D1374	8-719-200-82	DIODE 11ES2	(N300:AEP2,UK)
D1375	8-719-200-82	DIODE 11ES2	
D1376	8-719-200-82	DIODE 11ES2	
D1377	8-719-200-82	DIODE 11ES2	
D1378	8-719-200-82	DIODE 11ES2	
D1381	8-719-200-82	DIODE 11ES2	
D1382	8-719-200-82	DIODE 11ES2	
D1383	8-719-200-82	DIODE 11ES2	
D1501	8-719-200-82	DIODE 11ES2	
D1502	8-719-987-63	DIODE 1N4148M	
D1503	8-719-200-82	DIODE 11ES2	
D1511	8-719-987-63	DIODE 1N4148M	
D1521	8-719-987-63	DIODE 1N4148M	
D1525	8-719-987-63	DIODE 1N4148M	
D1704	8-719-987-63	DIODE 1N4148M	
D1705	8-719-987-63	DIODE 1N4148M	
D1901	8-719-010-33	DIODE UZ-4.7BSB-TA	

< FRONTEND >

Ref. No.	Part No.	Description	Remark
FE1	1-693-090-51	FRONT END (FM)(2 GANG)	(N300K)
FE1	1-693-217-11	FRONT END (4 GANG)	(N300:AEP,UK,G,IT)
FE1	1-693-244-21	FRONT END (3 GANG)	(N300:EE,CIS)

< IC >

Ref. No.	Part No.	Description	Remark
IC1	8-759-200-60	IC TA7060AP	(N300:AEP,UK,G,IT)
IC2	8-759-200-60	IC TA7060AP	(N300:AEP,UK,G,IT)
IC3	8-759-176-03	IC LA1835	
IC51	8-759-288-54	IC LC72130	
IC901	8-759-289-38	IC HA12195NT	(N300)
IC901	8-759-289-39	IC HA12196NT	(N300K)
IC902	8-759-822-09	IC LB1641	
IC1001	8-759-634-51	IC M5218AP	
IC1002	8-759-000-48	IC MC14052BCP	
IC1003	8-759-140-53	IC uPD4053BC	
IC1051	8-759-335-99	IC TMP87CP64F	
IC1101	8-759-291-98	IC M62423FP	
IC1131	8-759-281-42	IC TC9210P	
IC1202	8-759-111-68	IC uPC1237HA	
IC1341	8-759-820-13	IC L78MR06	
IC1355	8-759-604-30	IC M5F7808	
IC1502	8-759-269-92	IC SN74HCU04ANS-E20	
IC1901	8-759-822-09	IC LB1641	

< IFT >

Ref. No.	Part No.	Description	Remark
IFT1	1-409-636-11	TRANSFORMER, IF (CERAMIC FILTER)	

MAIN

Ref. No.	Part No.	Description	Remark
		< JACK >	
* J1001	1-580-912-11	JACK, PIN 4P (PHONO IN/VIDEO IN)	
		< COIL >	
L1	1-407-500-00	INDUCTOR 4.7mH (N300:AEP,UK,EE,CIS)	
L1	1-410-688-31	INDUCTOR 1.5mH (N300:G,IT/N300K)	
L2	1-410-336-11	INDUCTOR 220uH (N300:AEP,UK,EE,CIS)	
L31	1-414-142-11	INDUCTOR 1uH (N300:AEP,UK,G,IT)	
L1201	1-420-872-00	COIL, AIR-CORE (N300)	
L1251	1-420-872-00	COIL, AIR-CORE (N300)	
L1501	1-410-509-11	INDUCTOR 10uH	
		< LOW PASS FILTER >	
LPF1	1-239-597-11	FILTER, LOW PASS (N300)	
LPF2	1-239-597-11	FILTER, LOW PASS (N300)	
		< TRANSISTOR >	
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	(N300:EE,CIS/N300K)
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	(N300:EE,CIS/N300K)
Q3	8-729-230-99	TRANSISTOR 2SC2669-OY	(N300:EE,CIS/N300K)
Q4	8-729-230-99	TRANSISTOR 2SC2669-OY	(N300:EE,CIS/N300K)
Q5	8-729-422-57	TRANSISTOR UN4111	
Q6	8-729-119-76	TRANSISTOR 2SA1175-HFE	(N300:AEP,UK,EE,CIS/N300K:EA)
Q7	8-729-119-76	TRANSISTOR 2SA1175-HFE	(N300:AEP,UK,EE,CIS/N300K:EA)
Q8	8-729-900-80	TRANSISTOR DTC114ES	(N300:AEP,UK,EE,CIS/N300K:EA)
Q9	8-729-900-80	TRANSISTOR DTC114ES	(N300:AEP,UK,EE,CIS/N300K:EA)
Q10	8-729-900-80	TRANSISTOR DTC114ES	(N300:AEP,UK,EE,CIS/N300K:EA)
Q11	8-729-900-80	TRANSISTOR DTC114ES	(N300:AEP,UK,EE,CIS/N300K:EA)
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q902	8-729-900-65	TRANSISTOR DTA144ES	
Q903	8-729-801-93	TRANSISTOR 2SD1387	
Q904	8-729-116-83	TRANSISTOR 2SD1616-K(N300:AEP,UK,G,IT)	
Q905	8-729-116-83	TRANSISTOR 2SD1616-K(N300:AEP,UK,G,IT)	
Q906	8-729-900-80	TRANSISTOR DTC114ES	
Q907	8-729-422-57	TRANSISTOR UN4111	
Q908	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q909	8-729-900-80	TRANSISTOR DTC114ES	
Q910	8-729-900-65	TRANSISTOR DTA144ES	
Q911	8-729-900-65	TRANSISTOR DTA144ES	

Ref. No.	Part No.	Description	Remark
Q912	8-729-900-65	TRANSISTOR DTA144ES	
Q1001	8-729-900-80	TRANSISTOR DTC114ES	
Q1002	8-729-900-80	TRANSISTOR DTC114ES	
Q1003	8-729-900-80	TRANSISTOR DTC114ES (N300K)	
Q1004	8-729-900-80	TRANSISTOR DTC114ES	
Q1101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1102	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1103	8-729-900-63	TRANSISTOR DTA124ES	
Q1151	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1152	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1204	8-729-900-63	TRANSISTOR DTA124ES	
Q1205	8-729-900-36	TRANSISTOR DTC124ES	
Q1206	8-729-900-36	TRANSISTOR DTC124ES	
Q1301	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q1303	8-729-900-36	TRANSISTOR DTC124ES	
Q1321	8-729-118-00	TRANSISTOR 2SB1116-L	
Q1322	8-729-118-00	TRANSISTOR 2SB1116-L	
Q1361	8-729-118-00	TRANSISTOR 2SB1116-L	
Q1362	8-729-900-36	TRANSISTOR DTC124ES	
Q1501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1511	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1801	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< RESISTOR >	
R1	1-249-411-11	CARBON 330 5% 1/4W	(N300:AEP,UK,G,IT)
R2	1-249-411-11	CARBON 330 5% 1/4W	(N300:AEP,UK,G,IT)
⚠R4	1-249-401-11	CARBON 47 5% 1/4W	F
R5	1-249-411-11	CARBON 330 5% 1/4W	
R6	1-247-863-91	CARBON 22K 5% 1/4W	
R7	1-249-411-11	CARBON 330 5% 1/4W	
R8	1-249-411-11	CARBON 330 5% 1/4W	(N300:EE,CIS/N300K)
R9	1-247-863-91	CARBON 22K 5% 1/4W	
R10	1-249-411-11	CARBON 330 5% 1/4W	
R11	1-247-863-91	CARBON 22K 5% 1/4W	
R12	1-249-411-11	CARBON 330 5% 1/4W	
R13	1-249-411-11	CARBON 330 5% 1/4W	(N300:EE,CIS/N300K)
R14	1-247-863-91	CARBON 22K 5% 1/4W	
⚠R15	1-249-405-11	CARBON 100 5% 1/4W	F
R16	1-249-442-11	CARBON 510 5% 1/4W	
⚠R17	1-249-403-11	CARBON 68 5% 1/4W	F
R18	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R19	1-249-441-11	CARBON 100K 5% 1/4W	
R20	1-249-429-11	CARBON 10K 5% 1/4W	
R21	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R22	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R23	1-249-425-11	CARBON 4.7K 5% 1/4W	F

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No.	Part No.	Description	Remark
R24	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R25	1-249-429-11	CARBON 10K 5% 1/4W	
R26	1-249-429-11	CARBON 10K 5% 1/4W	(N300:AEP, UK, EE, CIS/N300K:EA)
R40	1-249-395-11	CARBON 15 5% 1/4W F	(N300K:EA)
R40	1-249-399-11	CARBON 33 5% 1/4W F	(N300/N300K:E, MY, SP)
R41	1-249-429-11	CARBON 10K 5% 1/4W	(N300:AEP, UK, EE, CIS/N300K:EA)
R42	1-249-429-11	CARBON 10K 5% 1/4W	(N300:AEP, UK, EE, CIS/N300K:EA)
R43	1-249-441-11	CARBON 100K 5% 1/4W	
R44	1-249-425-11	CARBON 4.7K 5% 1/4W F	(N300:AEP, UK, EE, CIS/N300K:EA)
R45	1-249-437-11	CARBON 47K 5% 1/4W	
R46	1-247-903-00	CARBON 1M 5% 1/4W	(N300:AEP, UK, EE, CIS)
R47	1-247-863-91	CARBON 22K 5% 1/4W	(N300:AEP, UK, EE, CIS)
R47	1-249-433-11	CARBON 22K 5% 1/4W	(N300K:EA)
R48	1-247-903-00	CARBON 1M 5% 1/4W	(N300K:EA)
R48	1-249-437-11	CARBON 47K 5% 1/4W	(N300:AEP, UK, EE, CIS)
⚠R50	1-249-401-11	CARBON 47 5% 1/4W F	
R51	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R52	1-249-429-11	CARBON 10K 5% 1/4W	
R53	1-249-429-11	CARBON 10K 5% 1/4W	
R55	1-249-429-11	CARBON 10K 5% 1/4W	
R56	1-249-417-11	CARBON 1K 5% 1/4W F	(N300:AEP, UK, EE, CIS/N300K:EA)
R57	1-249-429-11	CARBON 10K 5% 1/4W	(N300:AEP, UK, EE, CIS/N300K:EA)
R58	1-249-417-11	CARBON 1K 5% 1/4W F	
R59	1-249-417-11	CARBON 1K 5% 1/4W F	
⚠R60	1-249-405-11	CARBON 100 5% 1/4W F	
R61	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R62	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R63	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R64	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R65	1-247-807-31	CARBON 100 5% 1/4W	
R66	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R71	1-249-423-11	CARBON 3.3K 5% 1/4W F	(N300:AEP, UK, EE, CIS)
R72	1-247-863-91	CARBON 22K 5% 1/4W	(N300:AEP, UK, EE, CIS)
R73	1-249-425-11	CARBON 4.7K 5% 1/4W F	(N300:AEP, UK, EE, CIS)
R74	1-249-425-11	CARBON 4.7K 5% 1/4W F	(N300:AEP, UK, EE, CIS)
R75	1-249-425-11	CARBON 4.7K 5% 1/4W F	(N300:AEP, UK, EE, CIS)
R701	1-249-430-11	CARBON 12K 5% 1/4W	
R702	1-249-431-11	CARBON 15K 5% 1/4W	
R703	1-215-451-00	METAL 18K 1% 1/4W	(N300)
R704	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R705	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R706	1-249-429-11	CARBON 10K 5% 1/4W	
R707	1-249-429-11	CARBON 10K 5% 1/4W	
R708	1-249-429-11	CARBON 10K 5% 1/4W	
R709	1-249-429-11	CARBON 10K 5% 1/4W	
R710	1-249-429-11	CARBON 10K 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R712	1-249-429-11	CARBON 10K 5% 1/4W	
R713	1-249-429-11	CARBON 10K 5% 1/4W	
R714	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R715	1-247-863-91	CARBON 22K 5% 1/4W	
R716	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R717	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R718	1-249-417-11	CARBON 1K 5% 1/4W F	
R801	1-249-430-11	CARBON 12K 5% 1/4W	
R802	1-249-431-11	CARBON 15K 5% 1/4W	
R804	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R805	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R806	1-247-882-11	CARBON 130K 5% 1/4W	
R807	1-247-866-11	CARBON 30K 5% 1/4W	
R808	1-247-864-11	CARBON 24K 5% 1/4W	
R809	1-249-429-11	CARBON 10K 5% 1/4W	(N300)
R814	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R815	1-247-863-91	CARBON 22K 5% 1/4W	
R816	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R817	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R818	1-249-417-11	CARBON 1K 5% 1/4W F	
R901	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R902	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R903	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R904	1-249-417-11	CARBON 1K 5% 1/4W F	
R905	1-249-437-11	CARBON 47K 5% 1/4W	
R906	1-249-437-11	CARBON 47K 5% 1/4W	
R907	1-249-437-11	CARBON 47K 5% 1/4W	
R908	1-249-437-11	CARBON 47K 5% 1/4W	
R914	1-247-863-91	CARBON 22K 5% 1/4W	
R915	1-247-863-91	CARBON 22K 5% 1/4W	
R916	1-249-411-11	CARBON 330 5% 1/4W	
R917	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R918	1-249-429-11	CARBON 10K 5% 1/4W	
R920	1-249-429-11	CARBON 10K 5% 1/4W	
R921	1-249-417-11	CARBON 1K 5% 1/4W F	
R922	1-249-417-11	CARBON 1K 5% 1/4W F	(N300)
R923	1-249-417-11	CARBON 1K 5% 1/4W F	(N300)
R924	1-249-381-11	CARBON 1 5% 1/4W F	(N300:AEP, UK, G, IT)

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MAIN

Ref. No.	Part No.	Description				Remark
R925	1-249-381-11	CARBON	1	5%	1/4W	F (N300:AEP, UK, G, IT)
R926	1-249-381-11	CARBON	1	5%	1/4W	F (N300:AEP, UK, G, IT)
R1001	1-249-417-11	CARBON	1K	5%	1/4W	F (N300)
R1002	1-249-417-11	CARBON	1K	5%	1/4W	F
R1003	1-249-437-11	CARBON	47K	5%	1/4W	
R1004	1-249-416-11	CARBON	820	5%	1/4W	F (N300)
R1004	1-249-419-11	CARBON	1.5K	5%	1/4W	F (N300K)
R1005	1-247-897-11	CARBON	560K	5%	1/4W	
R1006	1-249-437-11	CARBON	47K	5%	1/4W	
R1007	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R1008	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R1009	1-249-409-11	CARBON	220	5%	1/4W	F (N300)
R1011	1-249-429-11	CARBON	10K	5%	1/4W	
R1012	1-249-429-11	CARBON	10K	5%	1/4W	
R1013	1-249-429-11	CARBON	10K	5%	1/4W	
R1014	1-249-429-11	CARBON	10K	5%	1/4W	
R1021	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R1022	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R1044	1-249-415-11	CARBON	680	5%	1/4W	F
R1048	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1049	1-249-441-11	CARBON	100K	5%	1/4W	
R1051	1-249-417-11	CARBON	1K	5%	1/4W	F (N300)
R1052	1-249-417-11	CARBON	1K	5%	1/4W	F
R1053	1-249-437-11	CARBON	47K	5%	1/4W	
R1054	1-249-416-11	CARBON	820	5%	1/4W	F (N300)
R1054	1-249-419-11	CARBON	1.5K	5%	1/4W	F (N300K)
R1055	1-247-897-11	CARBON	560K	5%	1/4W	
R1056	1-249-437-11	CARBON	47K	5%	1/4W	
R1057	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R1058	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R1059	1-249-409-11	CARBON	220	5%	1/4W	F (N300)
R1071	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R1072	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R1094	1-249-415-11	CARBON	680	5%	1/4W	F
R1098	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1099	1-249-441-11	CARBON	100K	5%	1/4W	
R1100	1-249-439-11	CARBON	68K	5%	1/4W	
R1131	1-249-441-11	CARBON	100K	5%	1/4W	
R1141	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1142	1-249-437-11	CARBON	47K	5%	1/4W	
R1143	1-247-863-91	CARBON	22K	5%	1/4W	
R1144	1-249-429-11	CARBON	10K	5%	1/4W	
R1145	1-247-863-91	CARBON	22K	5%	1/4W	
R1146	1-247-811-31	CARBON	150	5%	1/4W	
R1150	1-249-439-11	CARBON	68K	5%	1/4W	
R1181	1-249-441-11	CARBON	100K	5%	1/4W	
R1191	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1194	1-249-429-11	CARBON	10K	5%	1/4W	
R1195	1-247-863-91	CARBON	22K	5%	1/4W	
R1196	1-247-811-31	CARBON	150	5%	1/4W	
R1220	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1221	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1222	1-249-409-11	CARBON	220	5%	1/4W	F
R1223	1-249-409-11	CARBON	220	5%	1/4W	F
⚠R1226	1-216-454-11	METAL OXIDE	390	5%	2W	F
R1233	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1234	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1235	1-249-435-11	CARBON	33K	5%	1/4W	
R1236	1-249-441-11	CARBON	100K	5%	1/4W	
R1237	1-249-429-11	CARBON	10K	5%	1/4W	
R1240	1-249-438-11	CARBON	56K	5%	1/4W	
R1241	1-247-791-91	CARBON	22	5%	1/4W	
R1246	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1248	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1249	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1270	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1271	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1272	1-249-409-11	CARBON	220	5%	1/4W	F
R1273	1-249-409-11	CARBON	220	5%	1/4W	F
R1290	1-249-437-11	CARBON	47K	5%	1/4W	
R1296	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1298	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1299	1-249-389-11	CARBON	4.7	5%	1/4W	F (N300)
R1303	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1304	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1311	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1316	1-249-393-11	CARBON	10	5%	1/4W	F
R1321	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1322	1-247-791-91	CARBON	22	5%	1/4W	
R1323	1-247-791-91	CARBON	22	5%	1/4W	
R1341	1-249-417-11	CARBON	1K	5%	1/4W	F
R1342	1-249-429-11	CARBON	10K	5%	1/4W	
R1361	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1362	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1501	1-247-863-91	CARBON	22K	5%	1/4W	
R1502	1-247-863-91	CARBON	22K	5%	1/4W	
R1503	1-247-863-91	CARBON	22K	5%	1/4W	
R1511	1-249-429-11	CARBON	10K	5%	1/4W	
R1512	1-247-863-91	CARBON	22K	5%	1/4W	
R1513	1-247-863-91	CARBON	22K	5%	1/4W	(N300K)
R1520	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1521	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1522	1-247-863-91	CARBON	22K	5%	1/4W	
R1524	1-249-429-11	CARBON	10K	5%	1/4W	
R1525	1-249-429-11	CARBON	10K	5%	1/4W	
R1526	1-249-429-11	CARBON	10K	5%	1/4W	
R1527	1-249-429-11	CARBON	10K	5%	1/4W	
R1528	1-247-863-91	CARBON	22K	5%	1/4W	(N300K)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
R1528	1-249-431-11	CARBON 15K 5% 1/4W	(N300)
R1529	1-249-423-11	CARBON 3.3K 5% 1/4W F	(N300:EE)
R1529	1-249-425-11	CARBON 4.7K 5% 1/4W F	(N300:CIS)
R1529	1-249-429-11	CARBON 10K 5% 1/4W	(N300:AEP, UK, G, IT/N300K:EA)
R1529	1-249-431-11	CARBON 15K 5% 1/4W	(N300K:E, MY, SP)
R1530	1-247-863-91	CARBON 22K 5% 1/4W	(N300:AEP, UK)
R1530	1-249-423-11	CARBON 3.3K 5% 1/4W F	(N300K)
R1530	1-249-429-11	CARBON 10K 5% 1/4W	(N300:G, IT)
R1530	1-249-431-11	CARBON 15K 5% 1/4W	(N300:EE)
R1530	1-249-435-11	CARBON 33K 5% 1/4W	(N300:CIS)
R1531	1-249-429-11	CARBON 10K 5% 1/4W	
R1533	1-249-429-11	CARBON 10K 5% 1/4W	
R1541	1-249-429-11	CARBON 10K 5% 1/4W	
R1542	1-249-429-11	CARBON 10K 5% 1/4W	
R1543	1-249-429-11	CARBON 10K 5% 1/4W	
R1544	1-249-429-11	CARBON 10K 5% 1/4W	
R1551	1-247-807-31	CARBON 100 5% 1/4W	
R1552	1-247-807-31	CARBON 100 5% 1/4W	
R1554	1-247-807-31	CARBON 100 5% 1/4W	
R1555	1-247-807-31	CARBON 100 5% 1/4W	
R1556	1-247-807-31	CARBON 100 5% 1/4W	
R1557	1-247-807-31	CARBON 100 5% 1/4W	
R1561	1-247-807-31	CARBON 100 5% 1/4W	(N300K)
R1562	1-247-807-31	CARBON 100 5% 1/4W	(N300K)
R1563	1-247-807-31	CARBON 100 5% 1/4W	(N300K)
R1564	1-247-807-31	CARBON 100 5% 1/4W	(N300K)
R1571	1-249-429-11	CARBON 10K 5% 1/4W	
R1575	1-249-437-11	CARBON 47K 5% 1/4W	
R1701	1-247-807-31	CARBON 100 5% 1/4W	
R1702	1-247-807-31	CARBON 100 5% 1/4W	
R1704	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1705	1-247-807-31	CARBON 100 5% 1/4W	
R1706	1-247-807-31	CARBON 100 5% 1/4W	
R1707	1-249-417-11	CARBON 1K 5% 1/4W F	
R1708	1-247-807-31	CARBON 100 5% 1/4W	
R1710	1-249-429-11	CARBON 10K 5% 1/4W	
R1801	1-249-437-11	CARBON 47K 5% 1/4W	
R1802	1-249-437-11	CARBON 47K 5% 1/4W	
R1803	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1804	1-247-895-00	CARBON 470K 5% 1/4W	
R1805	1-249-416-11	CARBON 820 5% 1/4W F	
R1806	1-247-895-00	CARBON 470K 5% 1/4W	

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description	Remark
RB1	1-236-777-11	ENCAPSULATED COMPONENT	(N300K:EA)
RB1	1-239-260-11	ENCAPSULATED COMPONENT	(N300:G, IT/N300K:E, MY, SP)
RB1	1-239-876-11	ENCAPSULATED COMPONENT	(N300:AEP, UK, EE, CIS)
RB2	1-236-463-11	ENCAPSULATED COMPONENT	(N300:AEP, UK, EE, CIS)

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV1	1-238-601-11	RES, ADJ, CARBON 22K	
RV2	1-238-601-11	RES, ADJ, CARBON 22K	
RV701	1-238-600-11	RES, ADJ, CARBON 10K	
RV801	1-238-600-11	RES, ADJ, CARBON 10K	

< RELAY >

Ref. No.	Part No.	Description	Remark
RY1201	1-515-920-11	RELAY (24V)	

< TRANSFORMER >

Ref. No.	Part No.	Description	Remark
T1	1-402-424-11	COIL (ANT, SW3)	(N300K:EA)
T2	1-402-960-11	COIL (OSC SW3)	(N300K:EA)

< TERMINAL >

Ref. No.	Part No.	Description	Remark
TM1	1-537-238-21	TERMINAL BOARD	(N300K)
TM1	1-537-488-11	TERMINAL BOARD (ANTENNA)	(N300)
TM1201	1-537-240-31	TERMINAL BOARD (SPEAKERS)	(N300K)
TM1201	1-537-801-11	TERMINAL BOARD (SPEAKERS)	(N300)
TM1202	1-537-240-31	TERMINAL BOARD (SURROUND SPEAKERS)	

< VIBRATOR >

Ref. No.	Part No.	Description	Remark
X1501	1-579-952-21	VIBRATOR, CERAMIC (3MHz)	
X1502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	
XT51	1-760-549-11	VIBRATOR, CRYSTAL (4.5MHz)	

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A-2007-131-A MD BOARD, COMPLETE

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< CAPACITOR >

Ref. No.	Part No.	Description	Remark
C301	1-162-289-31	CERAMIC 390PF 10% 50V	
C302	1-124-443-00	ELECT 100uF 20% 10V	
C303	1-162-282-31	CERAMIC 100PF 10% 50V	
C304	1-130-483-00	MYLAR 0.01uF 5% 50V	
C305	1-124-282-00	ELECT 22uF 20% 16V	
C311	1-162-289-31	CERAMIC 390PF 10% 50V	
C313	1-162-282-31	CERAMIC 100PF 10% 50V	
C314	1-130-487-00	MYLAR 0.022uF 5% 50V	
C315	1-124-234-00	ELECT 22uF 20% 16V	
C331	1-136-434-11	FILM 120PF 5% 630V	
C332	1-162-288-31	CERAMIC 330PF 10% 50V	
C333	1-162-209-31	CERAMIC 27PF 5% 50V	
C401	1-162-289-31	CERAMIC 390PF 10% 50V	
C402	1-124-443-00	ELECT 100uF 20% 10V	

MD **MIC**

Ref. No.	Part No.	Description				Remark
C403	1-162-282-31	CERAMIC	100PF	10%	50V	
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	
C405	1-124-282-00	ELECT	22uF	20%	16V	
C411	1-162-289-31	CERAMIC	390PF	10%	50V	
C413	1-162-282-31	CERAMIC	100PF	10%	50V	
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	
C415	1-124-234-00	ELECT	22uF	20%	16V	
C431	1-136-434-11	FILM	120PF	5%	630V	
C432	1-162-288-31	CERAMIC	330PF	10%	50V	
C433	1-162-209-31	CERAMIC	27PF	5%	50V	
C601	1-126-157-11	ELECT	10uF	20%	16V	
C602	1-126-157-11	ELECT	10uF	20%	16V	
C611	1-126-157-11	ELECT	10uF	20%	16V	
C612	1-126-157-11	ELECT	10uF	20%	16V	
C621	1-136-601-11	FILM	0.01uF	5%	630V	
C622	1-124-925-11	ELECT	2.2uF	20%	100V	
C623	1-136-155-00	FILM	0.015uF	5%	50V	
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C627	1-124-903-11	ELECT	1uF	20%	50V	
C628	1-136-153-00	FILM	0.01uF	5%	50V	
C642	1-124-477-11	ELECT	47uF	20%	25V	
C651	1-164-159-11	CERAMIC	0.1uF		50V	

< CONNECTOR >

* CN601	1-568-864-11	SOCKET, CONNECTOR 21P
* CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P
* CN651	1-564-521-11	PLUG, CONNECTOR 6P

< IC >

IC601	8-759-111-44	IC	uPC4570C-1
IC602	8-759-143-54	IC	uPC1330HA
IC611	8-759-111-44	IC	uPC4570C-1

< COIL >

L331	1-410-780-11	INDUCTOR	27mH
L431	1-410-780-11	INDUCTOR	27mH

< TRANSISTOR >

Q621	8-729-142-46	TRANSISTOR	2SC2001-LK
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK
Q623	8-729-801-93	TRANSISTOR	2SD1387
Q651	8-729-900-65	TRANSISTOR	DTA144ES

< RESISTOR >

R301	1-247-881-00	CARBON	120K	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	F
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-247-889-00	CARBON	270K	5%	1/4W	
R305	1-247-858-11	CARBON	13K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R311	1-247-881-00	CARBON	120K	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-882-11	CARBON	130K	5%	1/4W	
R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
R331	1-249-430-11	CARBON	12K	5%	1/4W	
R401	1-247-881-00	CARBON	120K	5%	1/4W	
R402	1-249-409-11	CARBON	220	5%	1/4W	F
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-247-889-00	CARBON	270K	5%	1/4W	
R405	1-247-858-11	CARBON	13K	5%	1/4W	
R411	1-247-881-00	CARBON	120K	5%	1/4W	
R412	1-247-807-31	CARBON	100	5%	1/4W	
R414	1-247-882-11	CARBON	130K	5%	1/4W	
R415	1-247-850-11	CARBON	6.2K	5%	1/4W	
R431	1-249-430-11	CARBON	12K	5%	1/4W	
R601	1-249-409-11	CARBON	220	5%	1/4W	F
R602	1-249-409-11	CARBON	220	5%	1/4W	F
R608	1-249-409-11	CARBON	220	5%	1/4W	F
R609	1-249-433-11	CARBON	22K	5%	1/4W	
R611	1-249-409-11	CARBON	220	5%	1/4W	F
R612	1-249-409-11	CARBON	220	5%	1/4W	F
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F
R623	1-249-432-11	CARBON	18K	5%	1/4W	
R624	1-249-432-11	CARBON	18K	5%	1/4W	
R625	1-249-429-11	CARBON	10K	5%	1/4W	
R651	1-247-856-00	CARBON	11K	5%	1/4W	
R652	1-247-856-00	CARBON	11K	5%	1/4W	
R653	1-249-441-11	CARBON	100K	5%	1/4W	

< VARIABLE RESISTOR >

RV301	1-238-598-11	RES, ADJ, CARBON 2.2K
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K
RV341	1-238-551-11	RES, ADJ, CARBON 220K
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K
RV441	1-238-551-11	RES, ADJ, CARBON 220K
RV651	1-238-599-11	RES, ADJ, CARBON 4.7K
RV652	1-238-599-11	RES, ADJ, CARBON 4.7K

< TRANSFORMER >

T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION

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* 1-654-620-11 MIC BOARD (N300K)

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< CAPACITOR >

C1637	1-124-925-11	ELECT	2.2uF	20%	100V
C1638	1-162-294-31	CERAMIC	0.001uF	10%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
C1639	1-162-215-31	CERAMIC 47PF 5% 50V	
C1640	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1646	1-126-803-11	ELECT 47uF 20% 10V	
C1647	1-126-803-11	ELECT 47uF 20% 10V	
C1650	1-124-925-11	ELECT 2.2uF 20% 100V	
C1651	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1652	1-162-215-31	CERAMIC 47PF 5% 50V	
C1653	1-162-294-31	CERAMIC 0.001uF 10% 50V	
		< CONNECTOR >	
* CN1601	1-568-954-11	PIN, CONNECTOR 5P	
		< IC >	
IC1603	8-759-634-51	IC M5218AP	
		< JACK >	
J1601	1-569-113-11	JACK, LARGE TYPE (MIC 1)	
J1602	1-573-151-11	JACK, LARGE TYPE (MIC 2)	
		< TRANSISTOR >	
R1638	1-249-429-11	CARBON 10K 5% 1/4W	
R1639	1-249-417-11	CARBON 1K 5% 1/4W	F
R1640	1-249-441-11	CARBON 100K 5% 1/4W	
R1641	1-249-417-11	CARBON 1K 5% 1/4W	F
R1642	1-247-863-91	CARBON 22K 5% 1/4W	
R1650	1-249-429-11	CARBON 10K 5% 1/4W	
R1651	1-249-417-11	CARBON 1K 5% 1/4W	F
R1652	1-249-441-11	CARBON 100K 5% 1/4W	
R1653	1-249-417-11	CARBON 1K 5% 1/4W	F
R1654	1-247-863-91	CARBON 22K 5% 1/4W	
R1655	1-249-429-11	CARBON 10K 5% 1/4W	
R1657	1-249-429-11	CARBON 10K 5% 1/4W	

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Ref. No.	Part No.	Description	Remark
*	1-654-648-11	OPEN/CLOSE BOARD ****************	
		< JACK >	
J1201	1-569-113-11	JACK, LARGE TYPE (HEADPHONES)	
		< SWITCH >	
S637	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)	

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Ref. No.	Part No.	Description	Remark
*	A-4377-127-A	PANEL BOARD, COMPLETE (N300:AEP, UK, G, IT) *************************************	
*	A-4377-144-A	PANEL BOARD, COMPLETE (N300K) ****************************	
*	A-4377-603-A	PANEL BOARD, COMPLETE (N300:EE, CIS) ***********************************	
*	4-949-935-21	CUSHION (FL)	
*	4-969-681-01	HOLDER, FL TUBE	
		< CAPACITOR >	
C500	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C501	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C502	1-126-157-11	ELECT 10uF 20% 16V	
C503	1-124-257-00	ELECT 2.2uF 20% 50V	
C504	1-162-303-11	CERAMIC 0.0033uF 20% 16V	
C505	1-162-303-11	CERAMIC 0.0033uF 20% 16V	
C506	1-126-157-11	ELECT 10uF 20% 16V	
C507	1-124-257-00	ELECT 2.2uF 20% 50V	
C508	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C509	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C510	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C511	1-124-257-00	ELECT 2.2uF 20% 50V	
C512	1-162-290-31	CERAMIC 470PF 10% 50V	
C513	1-162-290-31	CERAMIC 470PF 10% 50V	
C514	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C515	1-124-257-00	ELECT 2.2uF 20% 50V	
C601	1-124-589-11	ELECT 47uF 20% 16V	
C602	1-162-282-31	CERAMIC 100PF 10% 50V	
C604	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C605	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C606	1-126-177-11	ELECT 100uF 20% 10V	
C607	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C609	1-126-157-11	ELECT 10uF 20% 16V	
C661	1-162-284-31	CERAMIC 150PF 10% 50V	
C662	1-162-284-31	CERAMIC 150PF 10% 50V	
C663	1-162-284-31	CERAMIC 150PF 10% 50V	
C664	1-162-284-31	CERAMIC 150PF 10% 50V	
C665	1-162-284-31	CERAMIC 150PF 10% 50V	
C666	1-162-284-31	CERAMIC 150PF 10% 50V	
C671	1-164-159-11	CERAMIC 0.1uF 50V	
C672	1-164-159-11	CERAMIC 0.1uF 50V	
C675	1-124-261-00	ELECT 10uF 20% 50V	
		< CONNECTOR >	
* CN601	1-568-834-11	SOCKET, CONNECTOR 15P	
		< DIODE >	
D503	8-719-987-63	DIODE 1N4148M	

PANEL

Ref. No.	Part No.	Description	Remark
D507	8-719-987-63	DIODE 1N4148M	
D511	8-719-987-63	DIODE 1N4148M	
D515	8-719-987-63	DIODE 1N4148M	
D530	8-719-987-63	DIODE 1N4148M	
D531	8-719-987-63	DIODE 1N4148M	
D532	8-719-987-63	DIODE 1N4148M	
D533	8-719-987-63	DIODE 1N4148M	
D600	8-719-987-63	DIODE 1N4148M	
D617	8-719-046-46	DIODE SEL5221S-TH8F	
D618	8-719-046-46	DIODE SEL5221S-TH8F	
D619	8-719-046-46	DIODE SEL5221S-TH8F	
D620	8-719-046-46	DIODE SEL5221S-TH8F	
D621	8-719-046-46	DIODE SEL5221S-TH8F	
D622	8-719-046-46	DIODE SEL5221S-TH8F	
D623	8-719-046-35	DIODE SEL5921A-TH8F	
D624	8-719-046-42	DIODE SEL5421E-TH8F	
D625	8-719-046-42	DIODE SEL5421E-TH8F	
D626	8-719-046-42	DIODE SEL5421E-TH8F (N300)	
D626	8-719-052-22	DIODE SEL58420C-TP (N300K)	
D627	8-719-046-42	DIODE SEL5421E-TH8F (N300)	
D627	8-719-052-22	DIODE SEL58420C-TP (N300K)	
D628	8-719-046-46	DIODE SEL5221S-TH8F (N300K)	
D629	8-719-010-12	DIODE UZ-2. 7BS	
D630	8-719-010-12	DIODE UZ-2. 7BS	
D634	8-719-024-99	DIODE 11ES2-NTA2B (N300K:MY)	
D634	8-719-200-82	DIODE 11ES2 (N300/N300K:E, EA, SP)	
D651	8-719-987-63	DIODE 1N4148M	
D652	8-719-046-46	DIODE SEL5221S-TH8F	
		< FLUORESCENT INDICATOR >	
FL601	1-517-341-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC501	8-759-634-51	IC M5218AP	
IC502	8-759-634-51	IC M5218AP	
IC602	8-749-922-36	IC GP1U50XB	
IC608	8-752-862-43	IC CXP82612-006Q	
IC608	8-752-866-01	IC CXP82612-009Q	
		< COIL >	
L601	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q601	8-729-422-57	TRANSISTOR UN4111	
Q602	8-729-422-57	TRANSISTOR UN4111	
Q608	8-729-900-63	TRANSISTOR DTA124ES	
Q609	8-729-119-78	TRANSISTOR 2SC2785-HFE (N300K)	
Q610	8-729-900-63	TRANSISTOR DTA124ES (N300K)	
Q611	8-729-119-76	TRANSISTOR 2SA1175-HFE (N300K)	
Q612	8-729-900-80	TRANSISTOR DTC114ES (N300K)	

Ref. No.	Part No.	Description	Remark
Q616	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< RESISTOR >	
R500	1-249-435-11	CARBON 33K 5% 1/4W	
R501	1-249-441-11	CARBON 100K 5% 1/4W	
R502	1-247-895-00	CARBON 470K 5% 1/4W	
R504	1-249-435-11	CARBON 33K 5% 1/4W	
R505	1-249-441-11	CARBON 100K 5% 1/4W	
R506	1-247-895-00	CARBON 470K 5% 1/4W	
R508	1-249-435-11	CARBON 33K 5% 1/4W	
R509	1-249-441-11	CARBON 100K 5% 1/4W	
R510	1-247-895-00	CARBON 470K 5% 1/4W	
R512	1-249-435-11	CARBON 33K 5% 1/4W	
R513	1-249-441-11	CARBON 100K 5% 1/4W	
R514	1-247-895-00	CARBON 470K 5% 1/4W	
R516	1-249-437-11	CARBON 47K 5% 1/4W	
R517	1-249-437-11	CARBON 47K 5% 1/4W	
R518	1-249-437-11	CARBON 47K 5% 1/4W	
R519	1-249-437-11	CARBON 47K 5% 1/4W	
R553	1-249-408-11	CARBON 180 5% 1/4W F	
R556	1-249-437-11	CARBON 47K 5% 1/4W	(N300K)
R609	1-249-429-11	CARBON 10K 5% 1/4W	
R610	1-249-429-11	CARBON 10K 5% 1/4W	
R611	1-249-419-11	CARBON 1. 5K 5% 1/4W F	
R612	1-247-811-31	CARBON 150 5% 1/4W	
R613	1-249-410-11	CARBON 270 5% 1/4W F	
R614	1-249-408-11	CARBON 180 5% 1/4W F	
R615	1-249-409-11	CARBON 220 5% 1/4W F	
R616	1-249-411-11	CARBON 330 5% 1/4W	
R617	1-249-413-11	CARBON 470 5% 1/4W F	
R618	1-249-414-11	CARBON 560 5% 1/4W F	
R619	1-249-416-11	CARBON 820 5% 1/4W F	
R620	1-249-418-11	CARBON 1. 2K 5% 1/4W F	
R621	1-249-420-11	CARBON 1. 8K 5% 1/4W F	
R622	1-249-423-11	CARBON 3. 3K 5% 1/4W F	
R623	1-249-427-11	CARBON 6. 8K 5% 1/4W F	
R624	1-249-419-11	CARBON 1. 5K 5% 1/4W F	
R625	1-247-811-31	CARBON 150 5% 1/4W	
R626	1-249-410-11	CARBON 270 5% 1/4W F	
R627	1-249-408-11	CARBON 180 5% 1/4W F	
R628	1-249-409-11	CARBON 220 5% 1/4W F	
R629	1-249-411-11	CARBON 330 5% 1/4W	
R630	1-249-413-11	CARBON 470 5% 1/4W F	
R631	1-249-414-11	CARBON 560 5% 1/4W F	
R632	1-249-416-11	CARBON 820 5% 1/4W F	
R633	1-249-418-11	CARBON 1. 2K 5% 1/4W F	
R634	1-249-420-11	CARBON 1. 8K 5% 1/4W F	
R635	1-249-423-11	CARBON 3. 3K 5% 1/4W F	
R636	1-249-427-11	CARBON 6. 8K 5% 1/4W F	
R637	1-249-419-11	CARBON 1. 5K 5% 1/4W F	

Ref. No.	Part No.	Description					Remark
R650	1-249-419-11	CARBON	1.5K	5%	1/4W	F	
R651	1-247-811-31	CARBON	150	5%	1/4W		
R652	1-249-410-11	CARBON	270	5%	1/4W	F	
R653	1-249-408-11	CARBON	180	5%	1/4W	F	
R654	1-249-409-11	CARBON	220	5%	1/4W	F	
R655	1-249-411-11	CARBON	330	5%	1/4W		
R656	1-249-413-11	CARBON	470	5%	1/4W	F	
R657	1-249-414-11	CARBON	560	5%	1/4W	F	
R658	1-249-416-11	CARBON	820	5%	1/4W	F	
R659	1-249-418-11	CARBON	1.2K	5%	1/4W	F	
R660	1-249-420-11	CARBON	1.8K	5%	1/4W	F	(N300K)
R661	1-249-423-11	CARBON	3.3K	5%	1/4W	F	(N300K)
R662	1-249-427-11	CARBON	6.8K	5%	1/4W	F	(N300K)
R663	1-247-903-00	CARBON	1M	5%	1/4W		
R664	1-249-415-11	CARBON	680	5%	1/4W	F	
R665	1-249-415-11	CARBON	680	5%	1/4W	F	
R666	1-249-415-11	CARBON	680	5%	1/4W	F	
R667	1-249-415-11	CARBON	680	5%	1/4W	F	
R668	1-249-415-11	CARBON	680	5%	1/4W	F	
R669	1-249-415-11	CARBON	680	5%	1/4W	F	
R682	1-249-408-11	CARBON	180	5%	1/4W	F	
R683	1-249-412-11	CARBON	390	5%	1/4W	F	
R684	1-249-410-11	CARBON	270	5%	1/4W	F	
R685	1-249-410-11	CARBON	270	5%	1/4W	F	
R686	1-249-410-11	CARBON	270	5%	1/4W	F	
R687	1-249-429-11	CARBON	10K	5%	1/4W		(N300K)
R688	1-249-410-11	CARBON	270	5%	1/4W	F	
R689	1-249-410-11	CARBON	270	5%	1/4W	F	(N300K)
R690	1-249-410-11	CARBON	270	5%	1/4W	F	
R691	1-249-410-11	CARBON	270	5%	1/4W	F	(N300K)
R692	1-249-413-11	CARBON	470	5%	1/4W	F	(N300K)
R693	1-249-429-11	CARBON	10K	5%	1/4W		
R695	1-249-421-11	CARBON	2.2K	5%	1/4W	F	
R696	1-247-807-31	CARBON	100	5%	1/4W		
R697	1-247-807-31	CARBON	100	5%	1/4W		
R703	1-249-429-11	CARBON	10K	5%	1/4W		
R704	1-249-429-11	CARBON	10K	5%	1/4W		
R710	1-249-429-11	CARBON	10K	5%	1/4W		
R711	1-249-429-11	CARBON	10K	5%	1/4W		
R712	1-249-429-11	CARBON	10K	5%	1/4W		(N300)
R713	1-249-429-11	CARBON	10K	5%	1/4W		(N300)
R773	1-249-429-11	CARBON	10K	5%	1/4W		
R774	1-249-429-11	CARBON	10K	5%	1/4W		
R778	1-249-429-11	CARBON	10K	5%	1/4W		
R779	1-249-429-11	CARBON	10K	5%	1/4W		
		< VARIABLE RESISTOR >					
RV601	1-467-869-11	ENCODER, ROTARY (VOLUME)					

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S603	1-554-303-21	SWITCH, TACTILE (▲)	
S604	1-554-303-21	SWITCH, TACTILE (▼)	
S605	1-554-303-21	SWITCH, TACTILE (DBFB)	
S606	1-554-303-21	SWITCH, TACTILE (SURROUND)	
S607	1-554-303-21	SWITCH, TACTILE (FUNCTION)	
S608	1-554-303-21	SWITCH, TACTILE (▯▯)	
S609	1-554-303-21	SWITCH, TACTILE (■)	
S610	1-554-303-21	SWITCH, TACTILE (▶▶)	
S611	1-554-303-21	SWITCH, TACTILE (◀◀)	
S612	1-554-303-21	SWITCH, TACTILE (◁)	
S613	1-554-303-21	SWITCH, TACTILE (▷)	
S614	1-554-303-21	SWITCH, TACTILE (HIGH SPEED DUBBING)	
S615	1-554-303-21	SWITCH, TACTILE (CD SYNCRO)	
S616	1-554-303-21	SWITCH, TACTILE (◀)	
S617	1-554-303-21	SWITCH, TACTILE (▶)	
S618	1-554-303-21	SWITCH, TACTILE (TUNER/BAND)	
S619	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S620	1-554-303-21	SWITCH, TACTILE (TUNING +)	
S621	1-554-303-21	SWITCH, TACTILE (TUNING MODE)	
S622	1-554-303-21	SWITCH, TACTILE (TUNING MEMORY)	
S623	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
S624	1-554-303-21	SWITCH, TACTILE (ENTER/ENXT)	
S625	1-554-303-21	SWITCH, TACTILE (CLOCK SET)	
S626	1-554-303-21	SWITCH, TACTILE (REC)	
S627	1-554-303-21	SWITCH, TACTILE (DAILY)	
S628	1-554-303-21	SWITCH, TACTILE (TIMER SET)	
S642	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)	
S643	1-554-303-21	SWITCH, TACTILE (SLEEP)	
S644	1-554-303-21	SWITCH, TACTILE (ROCK/1)	
S645	1-554-303-21	SWITCH, TACTILE (POPS/2)	
S646	1-554-303-21	SWITCH, TACTILE (JAZZ/3)	
S647	1-554-303-21	SWITCH, TACTILE (CLASSIC/4)	
S648	1-554-303-21	SWITCH, TACTILE (DANCE/5)	
S649	1-554-303-21	SWITCH, TACTILE (EQ MEMORY)	
S650	1-554-303-21	SWITCH, TACTILE (P.FILE)	
S651	1-554-303-21	SWITCH, TACTILE (● REC)	
S652	1-554-303-21	SWITCH, TACTILE (♯ UP)(N300K)	
S653	1-554-303-21	SWITCH, TACTILE (♭ DOWN)(N300K)	
S654	1-554-303-21	SWITCH, TACTILE (KARAOKE PON/MIX)(N300K)	
		< VIBRATOR >	
X601	1-567-819-11	VIBRATOR, CERAMIC (4MHz)	

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POLAR POWER

Ref. No.	Part No.	Description				Remark
*	A-4377-602-A	POLAR BOARD, COMPLETE (N300:CIS)				

****

< CAPACITOR >

Ref. No.	Part No.	Description				Remark
C1701	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C1702	1-130-014-00	FILM	470PF	5%	50V	
C1703	1-124-902-00	ELECT	0.47uF	20%	50V	
C1704	1-124-902-00	ELECT	0.47uF	20%	50V	
C1705	1-164-098-11	CERAMIC	0.047uF		12V	
C1706	1-124-903-11	ELECT	1uF	20%	50V	
C1707	1-162-288-31	CERAMIC	330PF	10%	50V	
C1710	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1711	1-130-471-00	MYLAR	0.001uF	5%	50V	
C1712	1-130-736-11	FILM	0.01uF	5%	50V	
C1713	1-130-736-11	FILM	0.01uF	5%	50V	
C1714	1-124-903-11	ELECT	1uF	20%	50V	
C1715	1-124-903-11	ELECT	1uF	20%	50V	
C1716	1-124-903-11	ELECT	1uF	20%	50V	
C1719	1-124-477-11	ELECT	47uF	20%	25V	
C1720	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1723	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1724	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C1725	1-124-477-11	ELECT	47uF	20%	25V	
C1726	1-124-903-11	ELECT	1uF	20%	50V	
C1727	1-124-903-11	ELECT	1uF	20%	50V	
C1728	1-104-792-51	ELECT	33uF	20%	16V	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
CN1701	1-750-418-11	CONNECTOR, FFC/FPC 13P	

< TRIMMER >

Ref. No.	Part No.	Description		Remark
CT1701	1-141-260-00	CAP, TRIMMER	50PF	

< DIODE >

Ref. No.	Part No.	Description		Remark
D1701	8-719-987-63	DIODE	1N4148M	
D1703	8-719-987-63	DIODE	1N4148M	
D1704	8-719-987-63	DIODE	1N4148M	
D1705	8-719-987-63	DIODE	1N4148M	

< IC >

Ref. No.	Part No.	Description		Remark
IC1701	8-759-063-04	IC	IR3R42	
IC1703	8-759-140-53	IC	uPD4053BC	

< COIL >

Ref. No.	Part No.	Description	Remark
L1701	1-409-497-11	COIL (FILTER)	

< TRANSISTOR >

Ref. No.	Part No.	Description		Remark
Q1701	8-729-422-57	TRANSISTOR	UN4111	
Q1702	8-729-900-80	TRANSISTOR	DTC114ES	
Q1704	8-729-900-80	TRANSISTOR	DTC114ES	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R1701	1-247-863-91	CARBON	22K	5%	1/4W	
R1702	1-249-435-11	CARBON	33K	5%	1/4W	
R1703	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R1704	1-247-858-11	CARBON	13K	5%	1/4W	
R1705	1-249-417-11	CARBON	1K	5%	1/4W	F
R1706	1-249-417-11	CARBON	1K	5%	1/4W	F
R1707	1-249-441-11	CARBON	100K	5%	1/4W	
R1708	1-249-440-11	CARBON	82K	5%	1/4W	
R1709	1-249-437-11	CARBON	47K	5%	1/4W	
R1710	1-249-429-11	CARBON	10K	5%	1/4W	
R1711	1-249-429-11	CARBON	10K	5%	1/4W	
R1714	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1715	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1716	1-249-441-11	CARBON	100K	5%	1/4W	
R1717	1-249-441-11	CARBON	100K	5%	1/4W	
R1718	1-249-429-11	CARBON	10K	5%	1/4W	
R1719	1-249-429-11	CARBON	10K	5%	1/4W	
R1721	1-249-434-11	CARBON	27K	5%	1/4W	
R1722	1-249-441-11	CARBON	100K	5%	1/4W	

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description	Remark
RV1701	1-238-600-11	RES, ADJ, CARBON 10K	
RV1702	1-238-599-11	RES, ADJ, CARBON 4.7K	

< TEST PIN >

Ref. No.	Part No.	Description	Remark
* TP1701	1-560-061-00	PIN, CONNECTOR 3P	
* TP1702	1-560-061-00	PIN, CONNECTOR 3P	

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Ref. No.	Part No.	Description	Remark
*	1-654-654-11	POWER BOARD	

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Ref. No.	Part No.	Description	Remark
	1-533-217-31	HOLDER, FUSE	
*	1-560-595-00	TERMINAL (WITH BASE)	

< FUSE >

Ref. No.	Part No.	Description	Remark
⚠F1901	1-532-350-00	FUSE, TIME LAG (T4AL)	
⚠F1902	1-532-350-00	FUSE, TIME LAG (T4AL)	

< RESISTOR >

Ref. No.	Part No.	Description				Remark
⚠R1901	1-217-637-00	FUSIBLE	1	5%	1/4W	F
⚠R1902	1-219-121-81	FUSIBLE	0.22	5%	1/4W	F
⚠R1903	1-219-121-81	FUSIBLE	0.22	5%	1/4W	F

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
*	A-4377-137-A	POWER AMP BOARD, COMPLETE *************************	(N300:AEP, UK, G, IT)
*	A-4377-606-A	POWER AMP BOARD, COMPLETE(N300:EE, CIS) **************************************	
*	A-4377-147-A	POWER AMP BOARD, COMPLETE(N300K) ********************************	

< CAPACITOR >

Ref. No.	Part No.	Description			
C1201	1-124-927-11	ELECT	4.7uF	20%	100V
C1202	1-162-288-31	CERAMIC	330PF	10%	50V
C1203	1-162-286-21	CERAMIC	220PF	10%	50V
C1204	1-126-803-11	ELECT	47uF	20%	10V
C1205	1-124-910-11	ELECT	47uF	20%	50V
C1206	1-124-122-11	ELECT	100uF	20%	50V
C1208	1-124-916-11	ELECT	22uF	20%	63V
C1210	1-137-375-11	FILM	0.068uF	5%	50V
C1211	1-137-375-11	FILM	0.068uF	5%	50V
C1220	1-126-925-11	ELECT	470uF	20%	10V
C1251	1-124-927-11	ELECT	4.7uF	20%	100V
C1252	1-162-288-31	CERAMIC	330PF	10%	50V
C1253	1-162-286-21	CERAMIC	220PF	10%	50V
C1254	1-126-803-11	ELECT	47uF	20%	10V
C1255	1-124-910-11	ELECT	47uF	20%	50V
C1256	1-124-122-11	ELECT	100uF	20%	50V
C1260	1-137-375-11	FILM	0.068uF	5%	50V
C1261	1-137-375-11	FILM	0.068uF	5%	50V

< CONNECTOR >

Ref. No.	Part No.	Description
* CN1203	1-564-518-11	PLUG, CONNECTOR 3P
CN1204	1-564-511-11	PLUG, CONNECTOR 8P

< DIODE >

Ref. No.	Part No.	Description	
D1201	8-719-987-63	DIODE	1N4148M
D1202	8-719-987-63	DIODE	1N4148M
D1251	8-719-987-63	DIODE	1N4148M

< IC >

Ref. No.	Part No.	Description	
IC1201	8-749-900-96	IC	STK-4142MK2 (N300)
IC1201	8-749-920-09	IC	STK-4152MK2K (N300K)

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q1201	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q1251	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA

< RESISTOR >

Ref. No.	Part No.	Description				Remark
R1201	1-249-417-11	CARBON	1K	5%	1/4W	F
R1202	1-249-437-11	CARBON	47K	5%	1/4W	
R1203	1-249-415-11	CARBON	680	5%	1/4W	F
R1204	1-249-437-11	CARBON	47K	5%	1/4W	
R1205	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1206	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1207	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1208	1-249-425-11	CARBON	4.7K	5%	1/4W	F
⚠R1209	1-212-881-11	FUSIBLE	100	5%	1/4W	F
⚠R1210	1-208-602-11	WIREWOUND	0.22	10%	2W	F
R1211	1-249-417-11	CARBON	1K	5%	1/4W	F
R1212	1-249-431-11	CARBON	15K	5%	1/4W	
R1213	1-249-441-11	CARBON	100K	5%	1/4W	
R1214	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1215	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1216	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1217	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R1218	1-247-791-91	CARBON	22	5%	1/4W	
R1219	1-247-791-91	CARBON	22	5%	1/4W	
R1228	1-247-881-00	CARBON	120K	5%	1/4W	
R1230	1-249-429-11	CARBON	10K	5%	1/4W	
R1242	1-249-429-11	CARBON	10K	5%	1/4W	
R1243	1-249-383-11	CARBON	1.5	5%	1/6W	F
R1251	1-249-417-11	CARBON	1K	5%	1/4W	F
R1252	1-249-437-11	CARBON	47K	5%	1/4W	
R1253	1-249-415-11	CARBON	680	5%	1/4W	F
R1254	1-249-437-11	CARBON	47K	5%	1/4W	
R1255	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1256	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1257	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1258	1-249-425-11	CARBON	4.7K	5%	1/4W	F
⚠R1259	1-212-881-11	FUSIBLE	100	5%	1/4W	F
⚠R1260	1-208-602-11	WIREWOUND	0.22	10%	2W	F
R1261	1-249-417-11	CARBON	1K	5%	1/4W	F
R1262	1-249-431-11	CARBON	15K	5%	1/4W	
R1263	1-249-441-11	CARBON	100K	5%	1/4W	
R1268	1-247-791-91	CARBON	22	5%	1/4W	
R1269	1-247-791-91	CARBON	22	5%	1/4W	

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Ref. No.	Part No.	Description	Remark
*	1-654-694-11	POWER PRIMARY BOARD *******************	

< CONNECTOR >

Ref. No.	Part No.	Description	Remark
* CN1951	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	(N300/N300K:EA, SP)

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

REGULATOR TC PANEL

Ref. No.	Part No.	Description	Remark
*	1-654-656-11	REGULATOR BOARD	
		***************	
		< CAPACITOR >	
C1351	1-124-443-00	ELECT 100uF 20% 10V	
C1352	1-124-907-11	ELECT 10uF 20% 50V	
C1356	1-124-907-11	ELECT 10uF 20% 50V	
C1357	1-124-443-00	ELECT 100uF 20% 10V	
		< IC >	
IC1351	8-759-334-30	IC LA5618	

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Ref. No.	Part No.	Description	Remark
*	1-654-650-11	TC PANEL BOARD	
		**************	
		< DIODE >	
D611	8-719-046-46	DIODE SEL5221S-TH8F (DECK B)	
D612	8-719-046-46	DIODE SEL5221S-TH8F (DECK A)	
D613	8-719-046-42	DIODE SEL5421E-TH8F (TAPE)(N300)	
D613	8-719-052-22	DIODE SEL58420C-TP (TAPE)(N300K)	
D614	8-719-046-42	DIODE SEL5421E-TH8F (TAPE)(N300)	
D614	8-719-052-22	DIODE SEL58420C-TP (TAPE)(N300K)	
		< TRANSISTOR >	
Q603	8-729-900-63	TRANSISTOR DTA124ES	
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE (N300K)	
Q615	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		< RESISTOR >	
R638	1-247-811-31	CARBON 150 5% 1/4W	
R639	1-249-410-11	CARBON 270 5% 1/4W F	
R640	1-249-408-11	CARBON 180 5% 1/4W F	
R641	1-249-409-11	CARBON 220 5% 1/4W F	
R670	1-249-409-11	CARBON 220 5% 1/4W F	
R671	1-249-409-11	CARBON 220 5% 1/4W F	
R672	1-249-429-11	CARBON 10K 5% 1/4W	(N300K)
R673	1-249-410-11	CARBON 270 5% 1/4W F	
R674	1-249-410-11	CARBON 270 5% 1/4W F	(N300K)
R675	1-249-410-11	CARBON 270 5% 1/4W F	
R676	1-249-410-11	CARBON 270 5% 1/4W F	(N300K)
		< SWITCH >	
S629	1-554-303-21	SWITCH, TACTILE (TAPE)	
S630	1-554-303-21	SWITCH, TACTILE (DECK SELECT)	
S631	1-554-303-21	SWITCH, TACTILE (TAPE REWIND ◀◀)	
S632	1-554-303-21	SWITCH, TACTILE (DOLBY NR)(N300)	
S633	1-554-303-21	SWITCH, TACTILE (DIRECTION MODE)	

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		*************	
⚠4	1-569-007-11	ADAPTER, CONVERSION 2P (N300K:E)	
⚠5	1-558-943-51	CORD, POWER (N300K:E)	
⚠6	1-575-651-21	CORD, POWER	
⚠7	1-569-008-11	ADAPTER, CONVERSION 2P (N300K:EA, MY, SP)	
⚠8	1-751-529-11	CORD, POWER (N300:UK)	
12	1-690-113-11	WIRE, FLAT TYPE (15 CORE)(N300K)	
12	1-690-590-31	WIRE (FLAT TYPE)(13 CORE)(N300:CIS)	
57	1-769-304-11	WIRE (FLAT TYPE)(19 CORE)	
58	1-751-590-11	WIRE (FLAT TYPE)(21 CORE)	
59	1-590-459-11	WIRE, FLAT TYPE (11 CORE)	
63	1-533-217-31	HOLDER, FUSE	
129	1-575-906-31	WIRE, FLAT TYPE (15 CORE)	
⚠351	8-848-387-01	OPTICAL PICK-UP BLOCK (KSS-213BA/S-N)	
352	1-769-069-11	WIRE (FLAT TYPE)(16 CORE)	
⚠F1901	1-532-350-00	FUSE, TIME LAG (T4AL)	
⚠F1902	1-532-350-00	FUSE, TIME LAG (T4AL)	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE)	
M1	X-3369-110-1	MOTOR ASSY (CAPSTAN)	
M2	X-3369-111-1	MOTOR ASSY (TRIGGER)	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
⚠S1911	1-570-046-21	SWITCH, VOLTAGE CHANGE (N300K:E, EA, SP)	
⚠T901	1-427-706-11	TRANSFORMER, POWER (N300K:E, EA, SP)	
⚠T901	1-427-707-11	TRANSFORMER, POWER (N300)	

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Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		******************************	
	1-467-969-11	COMMANDER, STANDARD (RM-S300L)	
	1-501-374-11	ANTENNA, LOOP (N300:AEP, G, IT, EE, CIS)	
	1-501-594-31	ANTENNA (FM)(N300:AEP, IT, EE, CIS)	
	3-798-238-31	MANUAL, INSTRUCTION (ENGLISH, POLISH, GERMAN)(N300:EE, CIS)	
	3-798-238-41	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)(N300:AEP)	
	3-798-238-51	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN)(N300:AEP, IT)	
	3-798-238-61	MANUAL, INSTRUCTION (DANNISH, FINISH, SWEDISH)(N300:AEP)	
	3-798-238-71	MANUAL, INSTRUCTION (GERMAN)(N300:G)	
	4-941-762-01	COVER (MLY), BATTERY (for RM-S300L)	
*	4-971-010-01	CUSHION	
*	4-971-339-01	INDIVIDUAL CARTON (N300:AEP, G, IT)	
*	4-971-340-01	INDIVIDUAL CARTON (N300:EE, CIS)	

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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
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		HARDWARE LIST	
		*******************	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#3	7-682-548-04	SCREW +BVTT 3X8 (S)(N300:UK)	
#3	7-685-871-01	SCREW +BVTT 3X6 (S) (N300:AEP, G, IT, EE, CIS/N300K)	
#4	7-621-849-00	SCREW, TAPPING	
#5	7-682-560-04	SCREW +BVTT 4X6 (S)	
#6	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#7	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#8	7-621-775-10	SCREW +B 2.6X4	
#9	7-621-775-00	SCREW +B 2.6X3	
#10	7-623-921-01	RING, RETAINING, CAPSTAN	
#11	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
#12	7-621-255-15	SCREW +P 2X3	
#13	7-685-131-19	SCREW +BTP 2.6X4 TYPE2 N-S	